









A

T R E A T I S E

*John*

ON

*Miller*

GONORRHOEA VIRULENTA,

AND

LUES VENEREA.

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VOLUME I.  
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TO  
DOCTOR WILLIAM SANDERS,  
SENIOR PHYSICIAN TO GUY'S HOSPITAL,  
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS,  
LONDON,  
AND OF THE ROYAL SOCIETY OF EDINBURGH,

These VOLUMES are respectfully dedicated, as a small testimony of regard, and public acknowledgment, for the advantages which have been derived from his various exertions to promote the extension and general utility of Medical Science, by

His obedient,

And very humble Servant,

BENJ N. BELL.

EDINBURGH, }  
1st. Nov. 1792. }



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## P R E F A C E.

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**A**S many of the symptoms of Gonorrhœa and Lues Venerea become frequent objects of the surgeon's attention, I at one time meant to have introduced a treatise on these diseases in the System of Surgery published some years ago, but I was prevented from doing so, by different publications upon the same subject being announced about the same period.

As these works have since made their appearance, and, as some of them have been very favourably received, it may be imagined, that farther writings upon this subject can scarcely at present be required. It must indeed be admitted that many valuable publications have come forth within these few years upon this branch of the profession; particularly one by Mr. John Hunter of London, intituled, A Treatise on the Venereal Disease; and another intituled, Practical Observations on Venereal Complaints, by Doctor Swediaur. But although much information may be obtained from both of these works, as well as from some other late publications upon this subject, there is still much left for others to elucidate. Such is the effect of experience and observation, that farther advantages are daily accruing from the labours of individuals in the treatment of this as well as of almost every other disease; and as this I hope will in some degree appear from the present publication,

so I shall still expect to find that the future endeavours of others will prove yet more successful.

Among other points which I have more particularly attempted to elucidate, the treatment of Gonorrhœa by injections, and the quantity of mercury to be exhibited in Lues Venerea, are, perhaps, the most important; and I flatter myself that I have given views concerning them, which, in practice, will be found to merit attention. The cure of Gonorrhœa by injections is, no doubt, very universally practised; but while in a great proportion of cases it proves successful, in others it fails entirely: The cause of this, so far as I know, has never hitherto been explained. Whether I may have conveyed an adequate idea of my opinion upon this point I cannot positively say; but the observations upon which it is founded are such, that all who pay attention to the subject may be enabled readily to ascertain such cases as will yield to injections, as well as those in which no advantage is to be expected from them.

The opinion which I have ventured to support, of the difference between the matter of Gonorrhœa, and that of Lues Venerea, will no doubt be censured by many. They ought, however, to recollect, in matters of opinion, which cannot be proved by demonstration, that some uncertainty must always take place; and before censuring with severity the opinions which others may suggest, they should consider whether their own may not be equally liable to objection. To me it appears that the reasons which I have adduced in support of my opinion are very conclusive, but I shall make full acknowledgment of my error, if sufficient reasons shall ever be given to show that it is ill-founded. In the mean time, it will be perceived, that the theory which I have adopted does not lead to any deviation from the practice which now generally prevails upon this point, while it serves to explain more clearly than the opinion which has commonly prevailed, several of the phenomena of the two diseases, as well as the cause of different remedies being necessary for each of them.

I do not expect that practitioners of experience and observation will derive much information from this publication, but I am hopeful that beginners will derive some advantage from it ; for it has been equally my desire to exhibit a correct view of the different symptoms of which I treat, and to point out the method of cure in a manner that will be clear and intelligible. Where theory is ever admitted, it is chiefly with a view to explain; upon rational principles, such points as the ingenuity of some speculative writers have tended to render intricate.



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# T R E A T I S E

ON

G O N O R R H Œ A V I R U L E N T A,

AND

L U E S V E N E R E A.



## CHAPTER I.

*Consideration of the Question, Whether Gonorrhœa and Lues Venerea originate from the same Contagion.*

**A**N opinion has been generally received amongst practitioners, that Gonorrhœa Virulenta and Lues Venerea are of the same nature; that they originate from the same contagion; and are only distinguished by the circumstance of Gonorrhœa being a local disease of the urethra, while the other is a general affection of the system. But, as there is cause to imagine that these diseases arise from different specific contagions, and as the establishing of one or other of these opinions must influence the conduct of the cure, it becomes a matter of importance to institute an enquiry into this part of our subject.

Both diseases are contracted in a similar way; both, in the first instance, affect the genital organs; and they occasionally appear at the same time in the same patient: hence it has been concluded that they have a common origin, and one method of cure has been supposed applicable to either.

The refusal of some patients to submit to the distress and inconveniency, the frequent result of a protracted mercurial course, and who nevertheless reco-

vered from the usual symptoms of Gonorrhœa, first suggested a doubt of the two diseases being produced by the same contagion. It is well known that Lues Venerea can be certainly cured by mercury, only; and the opinion respecting the existence of a specific contagion of Gonorrhœa, arising from this obvious and marked difference in the method of cure, appears to be fixed and established by the following facts: The symptoms and consequences of Gonorrhœa are perfectly different from those which take place in Lues Venerea. Both diseases have appeared, at different periods, in the same countries; and, in some instances, they have remained distinct and uncombined for a great length of time.

That the symptoms of the two diseases are different, is universally known. A particular detail of such as are peculiar to each, will be given in the ensuing chapters. At present, it is only necessary to observe, that Gonorrhœa consists of a discharge of puriform matter from the urethra; which, even by those who support the contrary opinion, is now admitted to be in almost every instance, a local affection, and that it very rarely contaminates the general habit of body: while Lues Venerea is a disease of the constitution, arising from the absorption of venereal virus from any part of the surface of the body, but most frequently from the genitals; by which are produced buboes, ulcers in various parts, particularly in the nose and throat, pains and swellings in the bones, with a variety of other symptoms which it is not at present necessary to mention.

The first appearance of the Lues Venerea is, for the most part, in the form of a chancre or small ulcer, in some part of the penis. It is universally admitted, that even the slightest affection of this nature is apt to produce the pox, or a general affection of the system; inasmuch, that no practitioner of experience will trust the cure of this symptom to local remedies. If the sore be left to itself, it almost always becomes worse. The matter which it affords is taken up by the absorbents; and buboes, with the other symptoms enume-

rated above, very certainly ensue. These are almost the universal consequences of a sore produced by the venereal virus; but they also occur frequently where the skin remains sound and entire; that is, absorption of the venereal poison often takes place where no vestige of ulceration is preceptible. This, indeed, is denied by many; but I have met with various instances of it, and it will be admitted by every practitioner of experience. Now, this being established, in the application of the venereal virus to every other part of the body, if the matter of Gonorrhœa were of the same nature, why does it not, in almost every instance, enter the system, and produce pox? So far as we know, the urethra is as plentifully supplied with absorbents as other parts of the body; the same kind of matter, when applied to them here, ought therefore to be productive of similar effects: and hence Lues Venerea ought frequently, perhaps in every instance, to be the consequence of Gonorrhœa, were the matter by which the two diseases are produced the same.

As this is a strong argument in favour of the two diseases proceeding from different kinds of contagion, much ingenuity has been exerted by those who support the contrary opinion, in endeavouring to account for it.

In the first place, it has been said, that Gonorrhœa sometimes terminates in pox, and, therefore, that this of itself is a sufficient proof of the two affections being of the same nature.

Were it certain that this ever happened, no farther evidence would be required, as a few well-marked instances would be conclusive; but every unprejudiced practitioner will admit, that no sufficient proofs of it have ever occurred.

In order to support this opinion, data must be received, which we know to be inadmissible. We must admit, that a person with chancres only, communicates to another, not only every symptom of pox, but of Gonorrhœa, and that another with Gonorrhœa only gives to all with whom he may have connection, chancres with their various consequences. This ought, indeed, to be a very common occurrence; inasmuch

that every practitioner should be able to decide upon it with certainty, if this opinion was well founded : Instead of which, it will be admitted by all, that the one disease being produced by the other is even, in appearance, a very rare occurrence, I have paid much attention to the point in question ; and, in almost every instance, a few cases indeed only excepted, and where the most particular enquiries even were made, it has happened, that a person infected with Gonorrhœa has received it from another evidently labouring under that disease, and that chancres have been communicated by such as were distressed with chancres only.

This, I am convinced, will be very commonly found to be clearly the case ; so that a few instances, bearing some appearances of the contrary, are much more readily explained on the idea of the two diseases being produced by different kinds of contagion ; and this may also be said of the few solitary cases that may be met with, of chancre being supposed to terminate in Gonorrhœa, and Gonorrhœa in chancre, and other symptoms of pox. We can more easily conceive that the same person should, in some instances, receive, and therefore be able to communicate, both kinds of contagion, than that the incident we are considering should be so seldom met with, were the opinion well founded, of the two diseases being originally of the same nature.

However ill founded an established opinion may be, if it has received the sanction of being generally adopted, we know how difficult it is to overturn it. There are few who enter so minutely into the consideration of such points as to be able to decide upon them ; and of those who do, there are very few who will take the trouble of engaging in such discussions as are necessary for the conviction of others. This may be considered as the chief cause of the point in question remaining so long in obscurity, as well as of the explanation hitherto usually given, of various circumstances in Gonorrhœa and Lues Venerea having been uniformly made to support it. It will also serve to

account for circumstances being held forth as matter of fact, which, on inquiry, are perceived to be ill founded; for, when once an opinion is admitted, we are apt to give such an explanation of whatever may seem to relate to it, as can in any way tend to support it.

Thus, although few in the present age will assert that Gonorrhœa often terminates in Lues Venerea, yet by many we are told, that it is very apt to do so when it is improperly treated. Whatever puts a sudden stop to a severe or copious discharge from the urethra is by many supposed to do harm. Hence all who condemn the use of injections in Gonorrhœa affirm, that they often convert a simple clap into a pox, by throwing into the blood what otherwise would have been carried off. This, however, is by no means supported by experience. A stimulating injection will no doubt excite pain and inflammation in the urethra; and this, in some instances, will be productive of swelled testes, and perhaps of sympathetic swellings in the glands of the groin; but I have not known a single instance of pox induced in this manner: and as I have long been in the daily use of injections, many cases of it must have occurred, if the idea I have just stated were well founded. Till of late, indeed, a patient who was so unfortunate as to have a clap suddenly stopped, was so certainly considered as poxed, that he was immediately put under a very complete course of mercury, by which he was made to undergo a very unnecessary and distressful confinement.

Although this practice, however, is now very commonly exploded, yet there are some who still adhere to it. I was called, in April 1784, to visit a gentleman who, in a Gonorrhœa attended with a good deal of inflammation, had been so foolish as to live freely, and to ride much on horseback. This, with the unguarded use of a very stimulating injection, put a sudden stop to the discharge; and at the same time it excited a very considerable degree of pain and inflammation along all the posterior part of the urethra, towards the

prostrate gland and neck of the bladder, attended with a painful and frequent desire to make water.

On the idea of these being symptoms of pox, he was immediately put under a course of mercury; and, when I first saw him, he had been using it for the space of six weeks. The surgeon in attendance acknowledged that no advantage had been derived from it; and the patient himself said that his distress was daily increasing. They were both, therefore, easily persuaded to lay the mercury aside; and, by the repeated application of leeches to the perineum, of fomentations, and opiates, to allay the pain, the inflammation soon began to subside; and, in a short time, he was perfectly well.

In December 1788, a young man called upon me, with a painful hard swelling in his groin, of an oblong form, nearly an inch in diameter, and reaching from the ring in the external oblique muscle down to the top of the testis. It appeared suddenly, about four months before, and seemed to be the consequence of a clap being too hastily stopped. He was at first attacked with severe pain at the neck of the bladder, which stretched to the groin, and down to the testis of the same side. This, together with a constant and painful inclination to void urine, rendered his life miserable. Nor was his distress in any degree abated by a course of mercury which he was immediately put under. On the contrary, the swelling, which at first was not thicker than a common quill, was now very considerable. My idea of the swelling was, that at first it had been merely an inflammatory affection of the vas deferens, which by degrees had spread to the rest of the spermatic chord; but, what was unusual, it had never affected either the testis or epididemis. As a considerable quantity of mercury had been taken, and as, instead of proving useful, it had rather appeared to do harm, the surgeon whom he employed was easily persuaded to trust the cure to other remedies. Local bloodletting with leeches was frequently repeated, both in the perineum and groin. The parts were regularly fomented with a solution of saccharum

faturni. His bowels were kept easy with gentle laxatives, and he was put upon a mild diet of milk and vegetables. In a few days the pain abated, and the tumour gradually lessened, till at last, in the course of five or six weeks, it was entirely gone.

In the course of last winter, I attended two different patients, with alarming symptoms about the neck of the bladder, evidently induced by the improper management of Gonorrhœa. The parts in both were not merely pained, but considerably swelled; and, at the same time, almost a total suppression of urine took place. Although in both the discharge from the urethra had been suddenly stopped, I did not advise mercury. The patients being both plethoric, were plentifully bled, first at the arm, and afterwards repeatedly with leeches in the perineum. This, with fomentations, and opiates to allay the violence of the pain, assisted by a cooling regimen and gentle laxatives, very soon completed the cures.

These instances are given out of a great number that might be adduced, merely to shew, that the symptoms which supervene on the sudden stoppage of a clap, are local, and not connected with any affection of the constitution, which they necessarily would be, if they were of the same nature with Lues Venerea.

It will perhaps be said, that although this may have happened in a few cases, yet that in others there has been cause to suspect, that Lues Venerea has been the consequence of a clap disappearing in this manner. In answer to this, it is sufficient for me to shew, that this is at least a rare occurrence, as I think I am intitled to do, from my never having met with an instance of it. It has been supposed, that the sudden check given to the discharge in cases of clap, must necessarily throw the matter into the blood, and that pox must accordingly ensue from it. Were the matter of the two diseases the same, this would happen in every instance; so that, when we can show that it seldom happens even in appearance, we are entitled, from this argument alone, to conclude, that they are produced by two different kinds of contagion; and, where pox

has appeared at the sudden termination of Gonorrhœa, that the two kinds of infection had either been communicated together; or, what may more frequently perhaps be the case, the patient will be found to have received the pocky contagion by communication with a diseased woman at the very time he laboured under Gonorrhœa. I have already remarked, that Lues Venerea is frequently produced by absorption while the skin remains entire, and where no chancre or excoriation is perceptible. There is therefore much cause to imagine, that in long continued cases of Gonorrhœa, many may be infected with Lues Venerea by communication with others labouring under it; and as this may happen without any external mark of it taking place, it is not surprising that some fallacy should arise from this circumstance.

The abettors of the opinion, that the matter of the two diseases are the same, admit that Gonorrhœa very seldom terminates in pox\*. And they attempt to account for this, that is, for the two diseases not being produced more frequently by the application of the same matter, by saying, that this depends upon the difference of parts to which the matter is applied.

They divide the different surfaces of the body chiefly into two kinds, what they term *secreting surfaces* and *non-secreting surfaces*. By the first they mean all the passages for extraneous matter, including also the ducts of glands, such as the mouth, nose, eyes, arms,

\* This is even granted by one who keenly supports the opposite doctrine in every other point. In speaking of Gonorrhœa and Chancre not terminating so frequently as might be expected in the production of each other, he says, "Although it does not often happen, yet it sometimes does, *at least there is great reason to believe so*. I have seen cases where a Gonorrhœa came on, and in a few days after in some, in others as many weeks, a chancre has appeared; and I have also seen cases where a chancre has come first, and in the course of its cure a running and pain in making water have succeeded." V. Treatise on the Venereal Disease, by John Hunter, page 16.

This is what every practitioner has seen; but by admitting so clearly that it is a very rare occurrence, Mr. Hunter tends rather to strengthen the contrary opinion: for, were the two diseases produced by the same kind of matter, the one would clearly and necessarily *often* terminate in the other. In the few cases which Mr. Hunter, in the course of extensive practice, has met with, there is more cause to imagine, either that the two diseases were communicated at once, or that the one was given while the patient laboured under the other, than that nature should deviate so much from her ordinary course as to produce them in a few instances so very differently from what obviously happens in the course of general observation.

and uræthra; and by *non-secreting* surfaces, the external skin in general. To which they add a third kind of surface, leading from the one to the other, as the glans penis, prolabium of the mouth, the inside of the lips, and the female pudendum: which surfaces, partaking of the properties of each of the others, but in a less degree, are capable of being affected in both ways, sometimes by being excited to secretion, and at other times to ulceration\*.

Upon this, their theory, or opinion of the point in question, is attempted to be established: When the contagion, either of Gonorrhœa or pox, and which they consider to be the same, is applied to any part of the external skin, particularly to the glans penis, where the skin is very thin, chancre or ulceration, they observe, will most readily ensue, as these are *not secreting surfaces*; while the same kind of matter applied to the urethra must necessarily excite Gonorrhœa, from this being a secreting surface, and therefore not so easily affected with ulceration as with irritation; by which an increased discharge, attended with some change in the mucus of the part, must accordingly be produced.

This idea, however, is more ingenious than solid. It might answer the purpose of giving a specious appearance to an ill-founded opinion, but it will not stand the test of inquiry.

In the first place, on the supposition of the matter of Gonorrhœa and Lues Venerea being the same, the latter ought to be a much more frequent occurrence than the former, from the greater ease with which the matter of infection must, in every instance, be applied to those parts on which it can produce chancres than to the urethra, where, instead of chancre or ulceration, it almost always excites Gonorrhœa. It is difficult to conceive how the matter by which the disease is communicated should find access to the urethra; while, on the contrary, all the external

\* Vide John Hunter on the Venereal Disease.

parts of the penis, particularly the glans, must be easily and universally exposed to it: and yet Gonorrhœa is a much more frequent disease than pox. Cases of Gonorrhœa are in proportion to those of Chancre and Pox, so far as my observation goes, of about three to one; while it is obvious, that the very reverse should happen, if the two diseases were produced by the same kind of matter\*.

Again, were this the case, should we not find Gonorrhœa, in almost every instance, terminating in Pox, and Chancre in Gonorrhœa; for every one knows, that in Gonorrhœa the matter is at all times passing from the urethra over the glans and prepuce, and in Chancre, that it is passing from the glans into the entrance of the urethra. It happens indeed, in a few instances, (Mr. Hunter, we see, has met with some cases of it) that the one disease supervenes upon the other: but we have also seen that these are rare occurrences; and, where they have not been communicated by subsequent connection with an infected person, that the two diseases have probably been given at one and the same time. It is no argument against this suggestion, to say, that instances have been met with of a Gonorrhœa appearing during the continuance of chancres of several weeks duration, and *vice versa*; for every practitioner must have met with instances of these diseases both appearing at the distance of two or three months from any exposure to infection.

I have at this moment a gentleman under cure for a deep, foul chancre, altogether within the urethra. It was of several weeks duration before I saw it, and yet no Gonorrhœa took place. He is now getting well by a complete course of mercury, and repeated application of caustic.

I have met with various cases of this, as every practitioner must have done; and, so lately as the month

\* Mr. Hunter supposes, that the proportion the cases of Gonorrhœa bear to those of Chancre, is as four or five to one. Vide Treatise on the Venereal Disease, p. 217. This is surely a weighty argument against the opinion he endeavours to support, of Gonorrhœa and Chancre proceeding from the same contagion.

of April last, I was called to a gentleman with a painful chancre on each side of the urethra. The sore extended about the eighth part of an inch up the passage; and the parts being much inflamed, I hesitated to apply caustic. This rendered the cure tedious, but still no Gonorrhœa took place. At last, after having taken a considerable quantity of mercury, and when the chancres were looking clean, and in a healing state, he was seized with all the symptoms of a severe clap, with heat in making water, chordee, and a plentiful discharge of a thin green matter. This, however, bore all the appearance of a recent infection. I at once said so to my patient; and he candidly acknowledged that he had imprudently exposed himself, by having connection with a girl of the town, three or four days previous to the accession of these symptoms.

We may also remark, that the discharge from Gonorrhœa frequently becomes so acrid as to excoriate the glans and preputium, and even to excite a very plentiful formation of matter; but every one knows that this is materially different from chancre. It is altogether different in appearance, and so materially different in its effects, that scarcely any practitioner of experience will trust the cure of chancre to any thing but mercury, while, in the other, mercury, I imagine, is very seldom employed. However extensive the excoriations may be, they are easily removed by local remedies; and I have never known an instance of pox succeeding to this kind of treatment. Nay, I have met with various instances of such affections, where mercury had been given in considerable quantities with no advantage whatever, and where a cure was effected by the use of an astringent wash.

About eighteen months ago, a gentleman came to town from a considerable distance, with an extensive excoriation over all the glans and preputium, attended with a discharge of a large quantity of thin, offensive matter. The quantity of matter indeed was so considerable, that at first sight it appeared to be the discharge from a very inveterate recent case of Gonorrhœa; but, on farther examination, it was found to

proceed entirely from the glans and prepuce, the clap by which it was produced being entirely gone.

He had taken mercury for the space of six weeks; and the parts had been regularly bathed in milk and water, but with no advantage. The discharge continued as plentiful as ever, and the preputium was beginning to acquire some degree of thickness, and to be difficult to retract. In the space of a week he was completely cured, merely by bathing the parts from time to time with brandy and water, and applying, during the night, a poultice strongly impregnated with *saccharum saturni*.

This, as well as a variety of similar affections, which, were it necessary, I might enumerate, clearly evince, not only that the matter of Gonorrhœa, when confined to the urethra, does not terminate in pox, but that it proves equally inoffensive to the constitution, where it is even so sharp and acrid as to excoriate the surrounding parts. This points out a very marked difference between the matter of the two diseases. In pox, even the slightest sore never fails to throw matter into the system, while the most extensive affections proceeding from Gonorrhœa are so seldom found to injure the constitution, that I have never met with an instance of it.

By those who wish to support the opposite doctrine, it is said, that the matter of Gonorrhœa would more frequently terminate in pox, were it not for the mucus of the urethra with which it is blended, and by which they suppose it to be rendered not only milder in its nature, but not so apt to be taken up by the absorbents. This, however, is merely ideal; and no proof can be advanced in support of it. Besides, the force of the argument is entirely done away, when we see, from what has been observed above, that even where the matter of Gonorrhœa is more acrimonious than almost ever occurs in cases of Chancre, so as in some instances to produce very extensive excoriations, that still no affection of the constitution ensues from it.

Nay, we see, even in such diseases as are found to proceed from what is termed a translocation of the matter

of Gonorrhœa to other parts of the body, and which we suppose to happen through the medium of the circulation, that still no affection of the constitution proceeds from them. This is particularly the case in such instances of ophthalmia as sometimes proceed from Gonorrhœa, and in which a considerable discharge takes place, of a puriform matter from the eye-lids, very similar to the matter of a recent clap. I have also met with instances, of patients labouring under Gonorrhœa being seized with a similar discharge from the membrane of the nose; but in none of these have I ever known Lues Venerea ensue. A considerable number of examples might be adduced of each of these; but the three following will be sufficient.

In the year 1786, a young man applied to me, with a very troublesome painful disease in both eyes. The eye-balls were not much inflamed outwardly; but as he experienced an intense degree of pain from the admission of light, I concluded that the retina, or other deep-seated parts of the eye, were in a state of inflammation; and the membrane of the eye-lids was not only inflamed, but a constant and copious discharge took place from them, of a greenish yellow matter, bearing much the appearance of the matter of a recent clap.

The account I received of his disease was this: That he had for eight or ten days laboured under Gonorrhœa, the symptoms of which, however, were not more severe than usual; when, after being heated with drinking port wine, the discharge from the urethra, which had previously been copious, disappeared almost entirely. His eyes, almost immediately thereafter, became painful; and, in less than twenty-four hours, the discharge of matter had taken place from the eye-lids.

The disease was at first treated with blisters, slight evacuations of blood, and the usual applications of ointments and collyria. These not proving successful, a course of mercury was prescribed: but, although different attempts were made with it, mischief always ensued from it. It did not lessen the discharge, while it obviously increased the inflammation, and rendered

the eyes more irritable. I therefore advised this remedy to be laid aside. A quantity of blood was taken from the temporal artery of one side; such vessels as were turgid upon the eye-balls were divided; scarifications were made in the inflamed parts of the eye-lids; poultices were applied over the eyes, in which opium and saccharum saturni were dissolved; and gentle laxatives were prescribed. By these means the pain soon abated; the inflammation and discharge of matter lessened; and, in the course of a fortnight, no symptom of the disease remained, but a degree of irritability on exposure to much light, with which both eyes continued to be distressed for five or six months thereafter.

In the course of the following year, on being attacked with Gonorrhœa, but of a more violent nature than the former, he was again seized, after exposure to much cold, and riding on horseback, to a similar affection of his eyes. In this instance too, bloodletting, and the other remedies formerly prescribed, proved successful; and he has not, since that period, had any return of the disease.

About two years ago, I was desired to visit a patient, who, during confinement from a swelled testis induced by a Gonorrhœa, was suddenly seized with a profuse discharge of matter from one of his nostrils, very similar to the running of a clap. The membrane of the nostril appeared tender, and somewhat inflamed; but little or no pain occurred from it. The discharge from the urethra had diminished considerably previous to the testis becoming inflamed, and, on this taking place from the nose, it disappeared entirely. This suggested the propriety of attempting to excite a return of the discharge by the urethra; but no advantage being derived from this, I advised the affection of the nose to be treated with injections similar to what we use in cases of clap. An astringent solution was thrown up, sometimes with a syringe, and at other times by inserting a bit of sponge immersed in it up the nostril; and in the course of a few days the running ceased entirely.

Since that period, the same patient has been twice affected in a similar manner, and the same kind of treat-

ment proved equally successful. No mercury was given, and no symptom of pox has ever appeared.

In the course of a few weeks after the recovery of this patient from the first attack of the disease, I was desired to see a friend of his, who for several years had been distressed with a similar discharge from both his nostrils. The running had occurred during the continuance of a clap; and although it had frequently diminished in quantity, yet at all times it was so considerable as to be productive of much uneasiness. No ulceration appeared on the membrane of the nostrils, but it was of a deep red colour, and tender over its whole extent. A variety of remedies had been employed; and at last, after the disease had gone on for upwards of three years, although no other symptom appeared, he was advised to undergo a course of mercury. This was done in the most attentive manner; but no advantage ensued from it.

In this situation, I expected that the same plan of treatment which proved successful in the preceding case, and which had also done so in others, would likewise answer here. In this, however, I was disappointed; for, although every variety of injection was used that I ever employed, yet no material advantage ensued from them. The running was sometimes indeed lessened by them, but it always returned equally severe as before; and although it has of late, even when no remedies were employed, become considerably less, it still continues in such quantities as to prove highly distressful. No other symptom of the disease, however, has ever occurred.

As a farther proof of the difference of the contagions of Syphilis and Gonorrhœa, it may be remarked, that no state of pox has ever been known to induce Gonorrhœa, which surely would occasionally happen, if the two diseases were of the same nature. We may also remark, that, in numberless instances, people have been poxed by the matter of Syphilis being by accident applied to a cut or a scratch, as often happens with surgeons in the dressing of chancres and buboes; but no one ever heard of a pox being got in this manner

from the matter of Gonorrhœa. It has indeed been said, that chancres may be produced by insinuating the matter of Gonorrhœa beneath the skin. But experiments upon this subject are productive of such anxiety and distress, that they never have been, nor ever probably will be, repeated so frequently as the nature of it would require. Nothing, therefore, can be admitted from this argument; for, in order to avoid fallacy, and to give support to the opinion, these experiments would not only require to be conducted with accuracy, but to be numerous, and to be repeated on a variety of patients under every possible variety of circumstances; whereas we have heard of only a single experiment or two being made by any individual; and even these seem to have been made under the management of such as were strongly and obviously biassed in favour of one side of the question.

In opposition to these, too, I may mention, that, induced by some late publications upon this subject, two young gentlemen of this place have made some experiments upon themselves, with a view to ascertain the point in dispute; but the result was materially different from what appears to have happened in the experiments to which I allude. By the introduction of the matter of chancres, as well as of buboes, into the urethra, some pain and irritation were excited, but no Gonorrhœa ensued; and, by fretting the skin of the prepuce and glans with a lancet, and rubbing the parts with the matter of Gonorrhœa, slight sores were produced; but they never assumed the appearance of chancres, and they healed easily without the use of mercury.—For the reasons mentioned above, however, we cannot place much dependence upon these or any other experiments that have yet been made upon this subject; we must trust therefore to experience and observation in the ordinary course of practice for means to ascertain it.

The other fact on which the doctrine we attempt to establish rests, is, that Gonorrhœa and Syphilis have appeared at different times in the same countries, and in

some instances have remained distinct and uncombined for a great length of time.

If these two diseases were of the same nature, and proceeded from the same contagion, they ought to have appeared nearly at the same time in every country to which the infection was carried. This does not appear, however, from the history of the disease, to have been the case. From the earlier writers upon this subject, it is evident, that the Lues Venerea was known in Europe at least forty years before the Gonorrhœa Virulenta. Doctor Astruc, whose accuracy and minute attention to this subject has not been equalled by any one, asserts, that in his time Gonorrhœa had not been long known in China, although we know that the Lues Venerea had long prevailed in that country: and it would appear, notwithstanding of any thing that has been said to the contrary, that the Lues Venerea was imported to the island of Otaheite a considerable time before Gonorrhœa. It seems to have been carried to that and other islands in the South seas by the very first European navigators who touched there, and to have remained distinct, without being connected with Gonorrhœa, for a very considerable time; for when Captain Cook visited these islands in his second voyage, we have authority for saying, that Gonorrhœa had not then appeared in them.

These historical facts all tend to prove, that where only one of these diseases has been imported to any particular district, it has always remained distinct, without producing the other; and which we cannot suppose would have happened, if both were formed by the same contagion. And, in addition to these, I may add another, not less remarkable, the truth of which may be ascertained by all who incline to inquire concerning it, as the scene of it lies in our own country.

In various parts of the country of Scotland, particularly in some parts of the Highlands; in Galloway, and in Dumfries-shire; the common people have, for

a great length of time, been afflicted with the Lues Venerea, under the denomination, as they term it, of Sibbens; and which, from those distressed with it having no communication with those infected with Gonorrhœa, has still retained its original, unmixed form, without a single instance, so far as I know, of Gonorrhœa, having been ever produced by it\*. There is evidence, in some of these districts, of this disease having prevailed among them for upwards of seventy years: Nay, in some of them, it is said, from tradition, to have been left there by the soldiers of Oliver Cromwell, and to have been given, since that period, by one generation to another; and, although I have had opportunities of seeing many hundred people labouring under it, with ulcers in the throat, nodes of the bones, fungous excrescences about the anus, blotches over the body, with almost every other symptom of Syphilis, yet not an instance has occurred to me, as I have observed above, nor have I heard of any, where Gonorrhœa took place in it. Whether it is from those infected with it concealing it longer than usually happens in towns, or what may be the cause of it, I shall not at present pretend to determine; but certain it is that the symptoms produced by it are more inveterate than we usually find them to be in the ordinary form of this disease. They appear to be more particularly infectious; the slightest communication with those labouring under the disease being apt to produce it. The symptoms spread more rapidly, and a greater quantity of mercury is, for the most part, required to remove them; but still Gonorrhœa is never produced in any stage of the disease.

A disease very similar to this broke out among the country people of Canada, some years ago, owing, as is imagined, to communication with some of the sol-

\* This must have happened from the disease in these districts prevailing almost entirely among poor country people, whose manners do not expose them to the hazard of being infected with Gonorrhœa. None, however, can escape the Sibbens who are much in company with those labouring under it; and so much are they convinced of its being the same disease with Lues Venerea, that even those who get it in the most innocent manner, are so much ashamed of it, that they never speak of it as long as it can possibly be kept secret.

diers quartered among them, who were infected with Lues Venerea. It is attended, as is the case with the Sibbens in Scotland, with all the symptoms of Syphilis in the most virulent form of that disease; and it is so very infectious as to be communicated by eating or drinking out of the same vessel, or drying with the same cloth that has been used by those labouring under it. It often enters the constitution by absorption from the surface, without any previous ulceration: In which case it afterwards breaks out in buboes, nodes, ulcers, and other symptoms of a confirmed Lues; but not an instance, I am informed, has happened, of Gonorrhœa being produced by it.

This, as well as what has occurred in the progress of Sibbens, is precisely what happened with the Lues Venerea when it first appeared in Europe, as well as at a late period in the South Seas; and there cannot be a doubt of the same circumstances taking place wherever the Syphilis only is communicated. We have seen, in all these instances, that Gonorrhœa has never been produced by it, which surely could not have happened if the two diseases were of the same nature, and produced by the same contagion. They could never, in that case, have remained for any length of time so distinct and precisely marked; for the one must necessarily, in almost every instance, have soon been productive of the other.

As a farther support of this opinion, I may add, that if the two diseases were of the same nature, and produced by the same infection, the remedies proving useful in the one might be expected to prove likewise so in the other. Instead of this, we find that those upon which we depend with most certainty in Gonorrhœa, have no effect whatever in the cure of Syphilis, while mercury, which is the only remedy, as we have observed above, upon which any dependence can be placed for the cure of Syphilis, does not, in Gonorrhœa, produce any advantage. Nay, that in some cases, it evidently does harm.

We also know, that Gonorrhœa will often terminate whether any remedy be employed or not, merely

by moderate living, and keeping the parts regularly clean. The disease by this alone will, in most instances, become gradually milder, till at last it will disappear entirely. No such thing, however happens in Lues Venerea. In this as we have already remarked, even the mildest symptom becomes daily worse, unless mercury be employed; nor will any practitioner of experience trust the cure even of the slightest chancre to any other remedy.

Upon this evidence alone, of the method of cure of the two diseases being so essentially different, we might I think, conclude that they are different in their nature, and that they proceed from different contagions. Were they of the same nature, and proceeding from the same cause, it is not possible to conceive that any medicine would act as a certain cure for one and do harm in the other, and yet every practitioner will admit that mercury, is the only remedy hitherto known, upon which we can depend for the cure of Lues Venerea, while it evidently often does harm, as I have already observed, in Gonorrhœa.

If the subject now under discussion was merely of a speculative nature I should not have entered so minutely into it, for in that case it would have been a matter of indifference both to practitioners and patients whether these diseases were of the same nature or not; but, as the treatment of Gonorrhœa ought to depend much upon this circumstance, I judged it proper, before proceeding to treat of it, to make this attempt to have the point in question ascertained.

## C H A P. II.

*Of the Gonorrhœa Virulenta.*

## S E C T. I.

*General Observations on the Symptoms, Causes, and Seat of Gonorrhœa Virulenta.*

EVERY discharge of matter from the urethra, excited by impure coition, is termed *Gonorrhœa Virulenta*. As the term implies a discharge of semen, and as this disease is not necessarily attended with any feminal evacuation, it is here obviously misapplied; but we think it better to retain even a faulty denomination when very universally received, than to incur the hazard arising from the confusion which might ensue from the proposal of amendments.

The period at which the discharge takes place, after exposure to infection, is always uncertain. I have known it happen in a few hours; often in the course of a day or two, and in some instances not till several weeks have elapsed. From the third or fourth day, to the seventh and eighth, is the most frequent period.

This does not appear, however, to have any effect on the nature or violence of the symptoms. Some indeed have imagined, that the disease must be mild or severe according as it appears early or late after the matter of infection has been applied; but this does not accord with my observation. I have often known the symptoms mild when they appeared early after exposure to infection, and severe when much time had elapsed. In one of the most obstinate cases of *Gonorrhœa* I have seen, the running did not appear till nearly the ninth week from the time of infection. A gentleman sailed from Jamaica two days after having connection with a woman of suspicious character. No

symptoms appeared till several weeks had elapsed; he concluded that he had escaped; when, two days before coming into port, being the fifty-eighth of his voyage, a very copious running appeared.

In some few cases, the discharge takes place without the patient having any warning of its approach; but, for the most part, it is preceded by symptoms indicating some degree of inflammation in the urethra: A sense of fulness and tightness is felt over all the under part of the penis; the patient has a more frequent desire than usual to void urine, accompanied with a peculiar kind of itching heat along the urethra, at the same time that the extremity of that canal is observed to be of a more deep red colour than ordinary, and more than usually tender to the touch. In some cases, too, the urethra seems to be contracted, or lessened in its diameter; the urine coming off in a stream much smaller than natural, while at other times it is forked, and as if the passage was divided in two.

On the running appearance it is sometimes white, and nearly of the consistence of purulent matter; but, for the most part, it is thin, and of a yellow green colour. In some cases it is brown, resembling the discharge of old scorbutic sores, and in others it consists almost entirely of blood, owing to the erosion or rupture of one or more blood-vessels in the urethra. In a great proportion of cases, the discharge of matter from the urethra, and scalding heat in making water, are the only symptoms which take place; but in others, these are accompanied with chordee, or painful involuntary erections; with much uneasiness in the testes, which frequently become so tender and irritable that the slightest touch excites pain. Severe degrees of pain often stretch from the penis to the groins and thighs; and in some cases over all the abdominal viscera, particularly over the under part of the belly.

In some cases the chordee, and in others these sympathetic pains stretching to the groins, and contiguous parts, are the most distressful symptoms of the disease.

I have known the latter so severe as to render the patient altogether unable to take any kind of exercise; while the chordee, which is usually worst in bed, is apt to deprive him entirely of sleep.

Besides these pains in the parts contiguous to the penis, and which we suppose to be chiefly the effect of nervous irritability, the glands in the groin in some instances swell, and become hard; but unless the running be accompanied with chancres, these swellings very commonly subside, and do not proceed to suppurate; an important fact, which may be considered as an additional proof to what was mentioned in the last chapter, of the difference between Gonorrhœa and Lues Venerea.

In the course of the disease the glans penis sometimes becomes red and inflamed, and a yellow, fœtid matter, oozes from its whole surface. In some cases this is accompanied with evident ulceration: in others the skin remains entire, and the matter is observed, upon pressure, to proceed from an infinite number of small points. In both they are supposed to proceed from the matter passing out of the urethra, and allowed, by the negligence of the patient, to rest too long upon the tender cuticle of the glans.

In some cases, however, this inflammatory affection of the glans, and discharge with which it is accompanied, takes place of itself, and without any discharge from the urethra. In which case, from the resemblance which the matter bears to that of Gonorrhœa, it has usually been termed Gonorrhœa Spuria. This inflammation, in some cases spreads to the prepuce, in which it very commonly produces some degree of contraction. When the prepuce becomes so much straitened that it cannot be drawn back, a disease is formed, which we term phymosis; and, when it contracts behind the glans, a disease termed paraphimosis takes place.

Although in Gonorrhœa some degree of uneasiness is usually felt along the whole course of the urethra, yet we know, that in most instances, the seat of the disease lies within an inch, or little more, of the point

of the penis, In a few cases, however, whether from maltreatment of the disorder; from the nature of the infection being more than usually virulent, or from peculiarity of constitution of the patient, the disease spreads backward till it extends over the whole length of the urethra, even to the bladder itself. The prostate gland and internal coat of the bladder become affected, and sympathetic pains stretch from these parts along the ureters to the kidneys.

When the bladder becomes in this manner diseased, the state of the patient is, for the most, extremely miserable: he feels almost a constant desire to make water, accompanied with severe pressure or bearing down upon the affected parts, proceeding from involuntary spasmodic contractions of the abdominal muscles. The whole region of the loins, particularly about the kidneys, becomes so painful and irritable, that much distress is excited by whatever tends to bring the muscles of these parts into action, and the patient often complains of a constant tenesmus, and of a frequent shooting pain about the anus and neck of the bladder.

In this stage of the disorder there is seldom any considerable discharge from the urethra; but, for the most part, a large quantity of very viscid-fætid-mucus is discovered in the urine, which, in the course of a few hours, subsides, and adheres so firmly to the sides of the vessel as not to be easily separated.

When a Gonorrhœa has either been improperly treated, or when much inflammation takes place from any other cause, the testes are apt to swell and inflame, and abscesses often form in Cowper's glands, as well as in other parts of the urethra. When these burst outwardly, or when the urine by any means finds access to them, they are often productive of great distress to the patient and perplexity to the practitioner, as they frequently baffle every attempt that is made for removing them.

It will readily be conceived that all the symptoms we have described are seldom or never met with in the same patient, and that these which do take place

will be in very different degrees in different cases. This is particularly remarkable with respect to the quantity of discharge, which, in some instances, is so trifling as scarcely to excite any inconvenience, whilst, in others it is so profuse as to prove highly distressful. In some cases too, the heat of urine is so inconsiderable as not to deserve notice; and in such instances also, the desire to pass water is seldom very frequent, while, in others, these symptoms are both so unsupportable as to render the patient miserable.

In most instances of Gonorrhœa any external inflammation which occurs is confined to the extremity of the urethra; but, in some cases, it runs so high as to spread over the whole glans, where it might be expected to terminate, as inflammatory affections in other parts of the body most frequently do, in the formation of abscesses. This, however, very rarely happens. We have observed, above, that, in a few instances, a purulent-like matter oozes from the whole surface of the inflamed glans; but I have scarcely known an instance of any extensive abscess in the substance of the glans. The inflammation, for the most part, terminates by dispersion. In a few cases it ends in mortification.

In women the symptoms of Gonorrhœa are, for the most part, much milder than in men. It sometimes happens that a flow of matter is all that occurs; and, as the discharge is very similar to the matter of fluor albus, the two diseases are often mistaken for one another.

This absence of pain, however, takes place only where the vagina is the seat of the disease. When the urethra becomes affected the symptoms are nearly the same as in the other sex. A distressful degree of irritation occurs at the extremity of the urethra, accompanied with heat of urine, and a very frequent desire to pass water. In some cases the inflammation spreads to the bladder, and even to the kidneys, uterus, and ovaria; or at least these parts come to be so much affected with pain as to give cause to suspect

that they are in a state of inflammation. Pain, even in a severe degree, will no doubt occur from nervous sympathy, and this I believe to be frequently the case here; but I have met with different instances of a considerable degree of inflammation being excited by Gonorrhœa in all the parts which I have mentioned: that is, they have become swelled hard, and excessively painful, insomuch that the slightest touch would create a great degree of uneasiness; and bloodletting, with other evacuations, were the only remedies from which relief was obtained. In some cases the matter is so sharp and acrid as to excoriate the clitoris, nymphæ, and labia pudendi. This excites a great deal of uneasiness; more than ever takes place in men from a mere affection of the external parts; for, as these parts are in women pressed upon in sitting, the slightest degree of inflammation is, from this cause alone, productive of much distress. They are often obliged to remain constantly in bed; being unable either to walk, stand, or sit.

It is impossible, in any case of Gonorrhœa, to determine at first, in what manner it will terminate, for we often find the most severe, as well as the most obstinate discharge, succeed to symptoms of the mildest nature, while in some cases it ends quickly and easily, where the symptoms at first were very severe. It is in general believed that the disease will be mild, and of short duration, where the running is white or yellow; and, on the contrary, that it will necessarily prove severe and tedious, where it is at first green, or much tinged with blood. This, however, is by no means universally the case, for instances occur daily, of the running proving tedious, where it was at first of the colour and consistence of purulent matter, while others often happen of its ending quickly, where the matter was at first either deeply tinged with blood, or of as deep a green as this discharge has ever been observed.

In the progress of this disease, we always reckon it a favourable circumstance to observe the matter be-

come thick and ropy. This cannot indeed be mentioned as an infallible proof of the discharge being soon to terminate; but it is, undoubtedly, one of the most favourable occurrences in every case of clap. When the running does not soon become ropy, it is apt to terminate in gleet, the most perplexing symptom in this disorder, and of which we shall speak more particularly in an ensuing chapter.

We shall hereafter have occasion to observe that a discharge may be produced from the urethra by different causes, very similar to the matter of Gonorrhœa virulenta. At present it is only necessary to remark, that, in this disease, the discharge is obviously the effect of irritation excited in the membrane of the urethra and contiguous parts, by matter from an infected person being applied to them.

Some difference of opinion has arisen of the manner in which the matter of infection is communicated to the urethra. By some it is supposed to happen in consequence of being first absorbed from the surface of the glans, and afterwards deposited on the membrane of the urethra; as they do not think that it can pass directly into the urethra, during coition. No good reason, however, can be given for this opinion: it appears more probable that the matter at first finds access between the lips of the urethra; that it afterwards spreads, in a gradual manner, along the passage, by mixing with the mucus, with which it meets, and that the progress which it makes will, in a great measure, depend upon the parts to which it is applied being more or less susceptible of inflammation; upon the general state of health of the patient; upon his manner of living; and perhaps upon other causes.

I do not conceive, however, that the kind of matter by which the discharge is produced has so much influence on the violence or duration of the symptoms as has been imagined. It is indeed the opinion of some that a severe and obstinate case of clap may always be traced to an infection of some peculiar degree of virulency; but this will not be found to happen with

any kind of uniformity. So far as my observation goes; it is in Gonorrhœa nearly the same as in small pox. The mildness or violence of symptoms does not depend upon the matter by which the disease is produced so much as upon other circumstances. Hence the same woman will, under the same infection, communicate the most virulent symptoms to one person, and the mildest to another.

That much depends upon the habit of body of the patient, and upon his manner of living, will scarcely be doubted; but the following fact renders it obvious. Three gentlemen, who associated much together, and who were accustomed to live freely, returning one night from a drinking club, resolved to visit a girl of the town, and to take a friend along with them who had that night been a visitor in their society, but who usually lived with much sobriety. They all had connection with the same girl. The three associates had all the most severe claps I ever met with; while the other, who also received the infection, had the disease in the mildest form. This would not, in similar circumstances, always happen, as we sometimes find people who live with much circumspection, liable to very severe attacks of Gonorrhœa; but, for the most part, the degree of violence of this disease has a considerable dependence on the manner of living of the patient.

The matter discharged in Gonorrhœa being very similar to what is daily observed, to flow from sores in other parts, and the quantity being often very considerable, it was the prevailing opinion, till of late, that it proceeded from sores or ulcers in the urethra. We now know, however, that ulcers very seldom take place here; and, when they do, that they may be traced to some accidental cause, such as the rupture of a blood-vessel, in no degree necessarily connected with the existence of the disease. On dissection, after death, it is found, almost in every instance, that the membrane of the urethra is entire, and that the matter is produced by inflammation alone.

It had long been known, that instances were occasionally met with on dissection, where no degree of ulceration in the urethra was discovered. This, however, was considered as a singular occurrence, and that it never happened but where the symptoms were uncommonly mild; for at that time it was supposed, that ulceration, or a destruction of parts, was requisite for the production of matter. But we now know, that this is by no means the case, and that an inflamed surface, even where no abrasion is perceived, will produce all the varieties of matter which sores ever afford, and that different kinds of animal fluids may be converted into these, merely by being kept in certain degrees of heat.

By this the difficulty is removed, which otherwise we must have experienced in accounting for the large quantities of matter daily discharged from the urethra in Gonorrhœa; which, in some cases is so considerable, that nothing less than an affection of the whole extent of that canal could afford it. Now those who imagine that the matter proceeds from ulcers, have never gone so far as to say that this ever takes place: nor could it probably occur, but with such consequences as very seldom ensue from Gonorrhœa. What I allude to forms an unanswerable objection to the idea of ulcers being frequent in this disease, even although no opportunities had occurred of proving it by dissection. Where the membrane of the urethra is in any point ruptured, either by the bursting of an abscess into it, or by any other cause, the most distressful consequences almost universally ensue; for the urine passing into the contiguous parts, forms swellings, which usually terminate in fistulous openings, that prove always tedious, and of uncertain event. Every practitioner knows, that even the slightest opening into the urethra is apt to terminate in this manner; so that, if the matter of Gonorrhœa proceeded from ulceration, the consequences of almost every case of Gonorrhœa, would necessarily prove much more formidable than we ever, in any instance, find them to be.

In cases of long continued Gonorrhœa, the membrane of the urethra is apt to be so relaxed, that fungous excrescences form in different parts of it. These not only impede the passage of the urine, but, becoming soft and tender, they at last ulcerate, and throw out very considerable quantities of matter. This, however, is never to be considered as the cause of Gonorrhœa, but merely as the effect of it. It often proceeds from mismanagement, either on the part of the patient or practitioner; and sometimes from some constitutional affection to which the patient at the time may be liable.

Instead of ulceration, we find, that in a great proportion of cases, there is merely a slight degree of inflammation, extending from the extremity of the glans to an inch or perhaps an inch and a half up the urethra. In more obstinate cases of clap, Cowper's glands, with their ducts, which terminate in the urethra, are found affected. In a third stage of the disease, the prostate gland, and contiguous parts of the urethra, are inflamed; and in the fourth, and what may be reckoned the most distressful stage of clap, the internal coat of the bladder is found inflamed. For the most part, the inflammation is confined to the neck of the bladder; but I have met with instances of its being perceptible over the whole of it, and of its even extending along the ureters to the kidneys.

This inflammation, however, is chiefly obvious at first. On a long continuance of the disease, the parts affected, instead of being either inflamed, or in a state of ulceration, are of a more pale colour than natural; the membrane of the urethra is found soft and relaxed; and coloured mucus or matter may be pressed out from an infinite number of small points over every part of it that has been diseased.

This is precisely what happens with every membrane that has remained long under a slight degree of inflammation, particularly with the membrane of the nose and trachea. These parts often afford very considerable quantities of matter, or of mucus very much

resembling matter, for a great length of time : and yet, upon dissection, they are seldom or never found in a state of ulceration, the membrane being for the most part only slightly inflamed. We may here indeed remark, that the resemblance between the two diseases, Gonorrhœa and Catarrh, is, in certain stages of each of them, very remarkable. They seem both to originate from inflammation excited upon a membrane. The matter of the one is in many instances very similar to that of the other. They seem both to be local affections only ; and the parts on which they are seated are, after death, found to be affected in a similar manner.

But although, in the latter stages of Gonorrhœa, in which chiefly opportunities occur of examining the state of the parts after death, the inflammation is found to be for the most part inconsiderable, yet, in the commencement of the disease, the parts are often highly inflamed, particularly when those about the neck of the bladder are affected. This is obvious from the symptoms ; particularly from the violent pain which always takes place, and from the antiphlogistic remedies employed for the cure of the disease.

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## S E C T. II.

### *Of the Prognosis in Gonorrhœa Virulenta.*

IN every disease, it is of importance for a practitioner to be able to say at what time and in what manner it will terminate. In none is information of this kind more anxiously wished for than in Gonorrhœa. The hopes and fears of patients lead them equally to wish for it ; but, from various causes, and more particularly from want of attention to the exact site of the disease, the duration of Gonorrhœa has always been a matter of much uncertainty.

I have observed above, that, on dissection, four different set of parts are found at different times to be

the seat of Gonorrhœa. When the running proceeds from the extremity, or from within about an inch and a half of the extremity of the penis, as happens in perhaps nine cases out of ten, there will, for the most part, be much cause to hope that a cure will soon be obtained. In such instances, when the patient is otherwise in good health, and when he does not interrupt the operation of the necessary remedies by improper conduct, the disease will not commonly endure a fortnight. Nay, a cure in such circumstances is often obtained in two or three days: but, whenever the lower parts of the urethra are affected, particularly when the prostrate gland and other parts about the neck of the bladder are diseased, the running, in almost every instance, proves obstinate. Even our most powerful remedies in other cases of clap are here doubtful in their effects. Hence no certain opinion can be formed of the event of the disease.

When these deep-seated parts are affected, the disease proves always tedious, whatever the habit of body may be; but it necessarily proves much more so when the constitution labours under any general affection, particularly when scrophula prevails, than when the patient is sound and healthy. Indeed a scrophulous taint existing even with the most simple case of clap, is apt to render it obstinate; I am so much convinced of this being the case, that in every instance of clap occurring in scrophulous patients I always give a guarded prognosis of the event. Cures are sometimes indeed obtained easily, even in patients of this description; but, for the most part, the discharge goes on for a great length of time, and resists the effect of every remedy we employ to remove it.

This uncertainty which takes place in the treatment of Gonorrhœa, and the great length of time to which the discharge, in some instances goes on, together with the many untoward and unexpected occurrences which often happen during the cure, tend altogether to render this branch of practice the most distressful of any in the province of medicine. In a great pro-

portion of cases a cure with proper treatment is easily and speedily obtained ; but every candid practitioner will admit that cases often occur in which the discharge continues obstinate for a great length of time, even under the use of the most powerful remedies with which we are acquainted. But, by distinguishing between one stage of the disease and another, and thus giving an opinion to patients of the probable event of it practitioners would avoid a good deal of embarrassment which they often experience, from giving so indiscriminately as they commonly do, a favourable prognosis at the commencement of every case of clap.

In forming a prognosis, it ought always to be kept in view, that however mild the symptoms may be at first, they may very quickly and unexpectedly become severe, by the disease proceeding from one part of the urethra to another, or even by the inflammation in the part which was at first affected becoming more severe. This arises from various causes, and often from circumstances which it is not in the power of practitioners to prevent. It sometimes occurs, indeed, from the use of improper remedies ; particularly from acrid injections being used with too much freedom ; but it happens much more frequently from other causes, particularly from the tendency which inflammation in one part of a membrane has to spread itself over the whole of it, and to the misconduct of patients, who, instead of living as they ought to do, very commonly proceed, during the cure, in the same course of riot and debauchery by which they were at first exposed to infection. Some patients, even under such circumstances, will no doubt get well ; but there is not a more undoubted fact than this, that the cure of the disease is for the most part both difficult and uncertain where the patient lives in a riotous and intemperate manner.

## S E C T. III.

*General Observations on the Cure of Gonorrhœa Virulenta.*

GONORRHŒA, as I have observed above, has, till of late, been very generally considered as depending upon an affection of the constitution ; or at least the discharge has been supposed to be of such a nature as at all times to affect the constitution, and therefore that a cure could not be obtained but by the use of remedies which operate upon the system at large.

For a considerable time mercury was chiefly relied upon. It was employed on the supposition of Gonorrhœa being a symptom of Lues Venerea ; but experience having shewn that no advantage was derived from mercury by itself, other remedies were employed along with it. These consisted chiefly of demulcents, evacuates, and astringents.

By a plentiful use of mucilagenous drinks, and other demulcents, it was meant to sheath the bladder and urethra more effectually from the acrimony of the urine, and at the same time to render the urine itself less acrid. Purgatives were employed for the purpose of carrying off the morbid matter of the disease, and nitre and other remedies were given with a similar intention ; and lastly, as the running was seldom lessened by the use of any of these, but, on the contrary, being frequently increased, bark, astringent balsams, and other corroborants, were prescribed for putting a stop to it. In some cases mercury was continued during the whole course ; in others it was left off at the time of entering upon the use of astringents.

The practice of physic when this prevailed being in most points highly improved, we are astonished to find such deficiency as this evinces, in the treatment of a disease which necessarily fell under daily observation. If patients had been left to themselves, without any in-

terference on the part of practitioners, the disease would often, in the course of time, have disappeared without any injury being done to the constitution; for we know that a simple clap will, in most instances, dry up whether any remedies be employed or not; but, by the liberal use of strong purgatives, and especially when this was conjoined with a low diet and a course of mercury, the constitution was so much debilitated that this alone rendered almost every case that occurred exceedingly obstinate: hence Gonorrhœa was considered as the most distressful as well as one of the most dangerous diseases to which the human species was liable. Lues Venerea was, for the most part, easily cured by mercury; but no advantage was derived from this remedy in Gonorrhœa: the disease usually proved exceedingly obstinate, and was very apt to terminate either in gleet or in obstructions of the urethra.

It soon appeared to practitioners of observation, that the medicines employed in Gonorrhœa, instead of proving useful, rather did harm; but the period was not yet arrived in which a more effectual remedy was to be proposed. Some, however, went so far as to say that medicines of every kind might be avoided, as they had found, from experience, that the disease went off both more easily and more quickly when left to itself than it ever did with the remedies at that time in general use. A low diet, mercury, and evacuants of different kinds, did much harm, as we have already observed, by inducing such a degree of debility and relaxation as materially affected the constitution; and the drastic purgatives, of which large doses were given daily, proved highly prejudicial, by the irritation which they excited. In certain stages of clap a strong purgative never fails to increase the pain; to excite a more frequent desire to make water; and to increase the discharge: nay, I have known various instances of a return of all the symptoms of Gonorrhœa being induced by the operation of a brisk purgative, long after the patient considered his cure as complete.

We need not therefore be surpris'd at the proposal of laying all such remedies as these aside; and it must be admitted that a cure will often take place, that is, the running would disappear, together with all the symptoms which attend it, without the aid of medicine. This would frequently happen where the disease was mild; where the patient was possessed of a healthy constitution; and where the running was not kept up by any impropriety on the part of the patient. The running would disappear here, as happens in corryza and other instances of matter proceeding from inflamed surfaces, whether any remedies should be employed or not: but this would seldom or never happen where the symptoms were severe, nor where the patient did not live in every respect as he ought to do. In all such cases the cure would prove tedious and uncertain, and the constitution would frequently be ruined, in the attempt,

When the mode of cure we have mentioned was proposed, an opinion prevailed that the discharge was kept up by some general affection of the constitution, and that nothing therefore could be so safe or so proper as to allow it to run as long as any part of the morbid matter by which it was produced continued. It was at that time admitted by all, that Gonorrhœa was of the same nature with Lues Venerea. Chancres, as well as all other venereal sores, were kept open till cures were obtained by the internal use of mercury. An erroneous idea prevailed of some advantage being derived from the discharge which they produced; and hence, even by those who saw clearly that no benefit was obtained from mercury in Gonorrhœa, it was still considered as the best practice to allow the disease as they said, to discharge itself in this manner.

Even granting that the matter of Gonorrhœa were the same with that of Lues Venerea, there is no cause to imagine that any advantage would ensue from this practice: but we now have no reason to doubt of the two diseases being perfectly different. A practice, therefore, which at one period might have been judg-

ed proper in one disease, would now be inapplicable in the other; and hence it has, very generally, been laid aside, although not yet given up by some individuals.

From the observations we had occasion to make in the last chapter, as well as from other circumstances, few will now doubt that the matter in Gonorrhœa proceeding in most instances from an inflamed state of the membrane of the urethra and contiguous parts, gives a local affection only, without being productive of any general disease of the constitution. From this view of the subject, it is obvious that no great advantage is to be expected from remedies applied to the system at large, and that a cure is to be looked for from the use of local remedies only. In the treatment of a simple sore, of a cut, a burn, or excoriations from any cause whatever, we would not surely expect to succeed by mercury, purgatives, or any remedies directed to the constitution. In all such affections we trust to local remedies, unless the presence of fever, or some other general affection, render other remedies necessary. For the same reason we ought, in Gonorrhœa, to depend entirely upon such remedies as act chiefly upon the parts affected; no others being necessary if it be not occasional blood-letting, and other evacuations, and these only where fever, plethora, or much inflammation take place.

In local affections of other parts our remedies are easily and directly applied: in the urethra some nicety and attention is necessary, not only in the mode of applying them to the diseased parts, but in judging of the period of the disease, or rather of the state of the parts to which they are to be applied: in other situations these circumstances fall directly under view, and we judge from appearances of the propriety of applying one remedy or another. In the urethra we are directed entirely by the symptoms, and we judge from these of the remedies to be employed, as well as of the parts to which they are to be applied being in a fit state for receiving them or not.

If the parts affected in Gonorrhœa were always the same no difficulty would occur in the application of our remedies; but, although the matter in the commencement of the disease proceeds in perhaps every instance from inflammation, yet, in some, parts are affected with inflammation, to which it would be improper and even hazardous to apply the same remedies which in a great proportion of cases are used with much safety and advantage.

We shall afterwards have occasion to shew that, in certain circumstances of Gonorrhœa, bougies may be used with much benefit; but, for the most part, we depend entirely upon injections, and chiefly upon such as are of a drying, astringent nature. Now it is obvious, that although we may with safety apply an astringent solution to an inflamed surface, as happens daily where the membrane of the urethra only is affected, yet that much risk may ensue from the same solution being applied to the ducts of inflamed glands: in the one case the discharge produced by the inflammation will be lessened and soon removed, and the inflammation itself will subside, while, in the other, by a sudden stop being put to the discharge of a gland already in a state of increased irritability, more inflammation will be excited, the parts affected will become swelled and painful, and at last the discharge will burst forth with redoubled violence.

That this frequently happens in the course of business every practitioner of candour will admit: nay, there are few patients who have been liable to different attacks of this discharge, who have not met with it in some degree. For a day or two the running will often disappear, and they consider the cure as complete, when after some degree of tension and uneasiness along the greatest part of the penis, particularly in the perineum, the discharge recurs as before, with every appearance of a recent infection.

As there are many who condemn the use of injections in Gonorrhœa, it is alledged that this is one of the inconveniences which they produce; but we shall presently have occasion to shew that this is by no

means the case, and that it proceeds entirely from a misapplication of the remedy; from using it in a state of the disease for which it is improper; and not from the remedy itself being of a hazardous nature.

This leads us to revert to the necessity there is for distinguishing between one state of Gonorrhœa and another. In the description of the symptoms, I remarked that they are evidently distinguishable into four sets, indicating four states or stages of the disease; and as it is a point of the first importance in practice to have these different states clearly marked, we shall now proceed to treat of them in separate sections.

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## S E C T. IV.

### *Of the First Stage of Gonorrhœa.*

IN the first stage of Gonorrhœa the running is never accompanied with violent symptoms. The extremity of the urethra becomes red, full, and somewhat prominent. The glans become tender and irritable, and ardor urinæ takes place in a greater or lesser degree, according to the extent of the inflammation. For the most part the heat of urine is inconsiderable; but in some instances, even in this stage of the disease, it is so severe as to excite a good deal of distress. Chordee sometimes occurs, but seldom in any considerable degree.

In the history of the disease we have seen, that in this stage of it the membrane of the urethra alone is affected, that is, the inflammation by which the discharge is produced has not extended to any other part.

We judge that this is the case when these symptoms only occur which have just been enumerated; when no glandular swellings are discovered along the course of the urethra, and particularly when the running proceeds entirely from within an inch, or an inch and a half of the extremity of that canal.

This circumstance of the discharge in Gonorrhœa proceeding from the extremity of the urethra, is at all times a proof of the inflammation not having advanced farther than to constitute what I have denominated the first stage of the disease. No glandular swellings are ever discovered while the running proceeds from these parts; and on dissection after death, the membrane of the urethra alone is found inflamed: but in some instances the discharge proceeds even from the superior parts of the urethra, while none of the contiguous glands are affected. This I consider as constituting the first stage of the disease, equally as when the extremity of the urethra is alone affected. The symptoms are not more violent in the one than in the other, and the method of cure is the same in both. It must, however, be admitted, that we do not frequently meet with this; for where the upper part of the urethra is affected, the inflammation is very apt to spread to the contiguous glands, and thus terminates in the second, third, or, perhaps, fourth stage of the disease.

We ascertain the place in the urethra, from whence matter is discharged, not merely from the height to which the pain or uneasiness with which it may be accompanied extends, for this proves often an equivocal mark of distinction, but from compressing the passage at any given spot, and pressing out all the matter between it and the end of the urethra. If, on removing the pressure, more can be brought down, we are sure that it must come from a greater height, and by proceeding in a gradual manner upwards we may thus, with very little attention, discover almost the exact spot from whence the discharge proceeds. It will afterwards appear that our being able to do so is of importance in conducting the cure.

From what has been said it will appear, that in this stage of the disease the running proceeds entirely from inflammation of the membrane of the urethra, without any affection of the glands which open into it; and in the removal of this the cure entirely consists.

Where the inflammation is considerable, as we judge to be the case when the ardor urinæ is severe, and especially when it occurs in a very full habit of body, it may be proper to prescribe blood-letting, a dose or two of any gentle laxative, and a low, cooling diet. At the same time violent exercise of every kind should be avoided, particularly riding on horseback.

Inflammation, however, in this state, is seldom so considerable as to render blood-letting necessary: in ordinary cases we now trust to the use of injections alone, and in all periods of the discharge I use them with equal freedom. Even where blood-letting, and a strict attention to an antiphlogistic regimen is necessary, I have never any difficulty in beginning immediately to the use of injections.

Those who are not in the daily practice of using injections, are afraid of prescribing them so generally as they ought to do: some, indeed, never employ them in any case, from the prejudice being strong which still prevails against them among almost all the older practitioners, while others admit that they may be used with safety and advantage, in the latter period of the disease, but never in the beginning, or while the inflammation continues in any degree severe.

This, however, is a timidity that will soon vanish with all who venture upon a more general use of them. They will find that injections, of a sufficient degree of astringency for removing the discharge, may in this state of Gonorrhœa be employed with perfect safety, even in the commencement of the disease, and whether the inflammation which takes place be mild or severe.

An idea is still entertained by many, that the running should not be stopped till some of the virulency by which it was produced is carried off; and hence they object, as we have just observed, to the early use of injections. But, as we have seen that Gonorrhœa is a local affection, and as we know that in other parts of the body local inflammation may at all times be removed with safety, nay, that it is the best practice

to attempt it, we might from this alone infer, that it would be equally proper here. But independent of this, I can with confidence assert, and all who employ injections generally will do so, that they may in this stage of Gonorrhœa be used at all times, and with more certainty of proving successful the more early they are applied. Of this I am so clearly convinced, that I would advise all who have it in their power, to employ injections instantly on the discharge taking place. They commonly, indeed, prove successful at whatever period they are used; but I have uniformly found that they act more quickly in the commencement of the disease than in the latter stages of it.

While practitioners differ in opinion respecting the most proper period of Gonorrhœa for using injections, they likewise differ in their ideas of the kinds of these remedies best calculated for the periods in which they are employed. In the commencement of Gonorrhœa, and at all times when much pain takes place, it is the opinion of many that emollient injections only ought to be used, such as warm oil, emulsions of almonds, infusions of althea, and lintseed: but in this there appears to be some mistake; and I can decidedly say so from having often experienced the inefficacy of the practice.

On first entering upon business, I found it the opinion of many who used injections with freedom, that those of the emollient kind ought alone to be advised while much heat of urine, or any considerable degree of inflammation continued. These, it was imagined, would sheath and protect the parts from the acrimony of the urine, and on the inflammation subsiding, they conceived that injections of an astringent nature might be used with more safety. The opinion was plausible, and supported by some of our best practitioners; I was therefore induced, along with others, to go into it; but it soon appeared that no advantage was to be derived from it: on the contrary, it was evidently the cause of much distress, by rendering the cure of Gonorrhœa much more tedious than it otherwise might

have been ; for injections of the emollient kind never tend to shorten the continuance of the discharge, and often render it more fixed and permanent, by relaxing the parts from whence it proceeds.

Neither are injections of this description necessary as a preparative to those of the astringent kind : in this conviction I have for many years past laid them altogether aside, and during this period have used none but such as are evidently astringent ; and although I employ them with all manner of freedom, I have never perceived any bad effects arise from them.

In this state of Gonorrhœa injections of the astringent kind may be used with safety and advantage, from the very commencement of the discharge, as well as at any period of the disease, whatever the degree of inflammation may be. Instead of increasing the inflammation, they tend, when of a proper strength, to lessen it ; they relieve more immediately than any other remedy, the ardor urinæ ; and they commonly lessen or remove the discharge in a very short space of time.

In all cases, therefore, of this kind, where we suppose the disease to proceed entirely from the membrane of the urethra, I pay no regard to the continuance of the running ; the patient is immediately put upon the use of injections, and no harm ever ensues from it.

There is only one symptom which, in this stage of clap, precludes the immediate use of injections, viz. pain and swellings of one or of both testes : a perseverance in the use of injections during the continuance of this symptom very commonly does harm, and ought not therefore to be advised ; not that they tend to increase the inflammation, even of the testis, but by removing the discharge from the urethra, they deprive us, as we shall afterwards see, of one of the most effectual remedies for a swelled testicle, proceeding from Gonorrhœa.

A variety of astringent injections are employed by practitioners, but some proving more effectual than others, an investigation of this part of our subject is thereby rendered necessary.

Almost any astringent injection will lessen the discharge. Port wine, and claret, duly diluted, sometimes answer. I have often succeeded with a tea-spoonful of brandy added to half an ounce of rose water: nay, rose water itself, or even cold water directly from the spring, will often give a stop to the discharge; but, for the most part, the effects of these are only temporary. In slight affections, indeed, they sometimes complete the cure, but in general we are under the necessity of employing astringents of a more powerful kind.

Among the first injections used in Gonorrhœa, mercury, in one form or another, was a constant ingredient. It was not, however, employed as an astringent; for at that period the use of astringents of any kind would have been considered as hazardous. Being applied in this manner directly to the seat of the disease, it was supposed that it might act as a specific in the cure of it. But although I have given full and complete trials to injections of the mercurial kind, and in every variety of form, I have not, in any instance, found them to prove more effectual than other astringents. In order to ascertain the point to which I allude, with as much certainty as possible, I have repeatedly made it the subject of experiment. Of different patients in Gonorrhœa, all nearly distressed with similar symptoms, some have been made to employ a mixture of calomel with mucilage and water; others have used quicksilver dissolved in mucilage, while some have at the same time been using injections in which mercury did not enter as an ingredient.

I admit that in most of these instances mercury proved serviceable, but by no means in such a degree as many of the articles with which it was put, upon this comparative trial. There is no cause, therefore, to imagine that it acts as a specific in the cure of clap.

To prevent interruption in this part of the work, formulæ will be given in the Appendix to this volume, of all the preparations I wish to recommend. Of mercurial astringent injections, the prescriptions No. 1,

2, and 3, are perhaps the safest and best that can be used.

Calomel used in injections seems to act in a similar manner with lapis calaminaris armenian bole, and other astringent earths; not by any specific virtues with which they are endowed, but by restoring tone to parts weakened by the disease. It is in this manner, I conclude, that all of these articles act in the cure of Gonorrhœa; and in cases that are not particularly obstinate, they very commonly prove effectual. Lapis calaminaris, or tutia finely levigated, suspended in thin mucilage, makes a very safe and useful injection. No. 4th and 5th are formulæ of these; and No. 6 is a prescription of a gentleman retired from business, who, at one period, was in very extensive practice in London, and who in the course of much experience in this particular branch, gave the preference to articles of this kind over all others that he ever employed.

These earths possess one important advantage for this purpose: they never do harm, in whatever quantity they are used. If levigated with sufficient care and attention, they may be used in any quantity that the liquid in which they are conveyed can be made to suspend.

Allum dissolved in water makes a safe and useful injection. It proves equally safe, and still more powerful, when conjoined with a decoction of oak bark, or an infusion of galls, for which prescriptions are given No. 7th, 8th, and 9th.

Kino, an astringent lately much used in Diarrhœa, proves also an useful ingredient in injections for Gonorrhœa. I have in various cases found it prove successful where other articles had failed, and I have not observed that it ever does harm. As it is not very soluble in water it becomes necessary to suspend it when in fine powder, by means of mucilage, as is prescribed No. 10th and 11th.

Opium proves often an useful ingredient in injections of this kind; and as it is equally serviceable whether much pain takes place or not, I conclude that it

does not act so much as a sedative as it does as an astringent. No. 12th and 13th are formulæ of injections with opium.

Some of the astringent balsams, properly combined with water, make a good variety of injection for Gonorrhœa, particularly the balsamum canadense, and balsamum copaiba, as in No. 13th, and 14th.

Lead, in various forms, proves highly serviceable in these injections. Cerusse suspended in mucilage and water is often employed with advantage; but acetum lythargyri, and saccharum saturni dissolved in water are most to be depended on. Formulæ of these are given in No. 15th, 16th, and 17th.

Of all the astringent injections, however, which I have used, none prove so powerful as white vitriol dissolved in water. In the quantity of a grain and half to an ounce of water, it seldom creates much irritation, and it does not often fail in this variety of the disease, in which alone injections of any kind ever prove materially useful. No. 18th is the form of injection, which, in the common occurrences of daily practice, I am in the habit of using; and No. 19th is a combination of vitriol and acetum lythargyri, which, in a few cases, I have found to answer better than either of these articles separately.

Many other astringents might be enumerated, from which very useful injections might be prepared, but the formulæ which I have given contain the most powerful of any with which we yet are acquainted. None of them will at all times prove successful; for even in this the most simple variety of the disease, the most active remedies will in some instances fail: but I can from experience in this branch of practice assert, that it will seldom happen where the injection is properly managed and duly persisted in.

The vitriolic injection, No. 19, I have mentioned as the most useful formulæ of any; but it will sometimes happen that a case will readily yield to others which has long resisted this. When we do not, therefore, soon succeed with one injection, we ought,

without loss of time, to have recourse to others, by which our purpose will be more easily accomplished than by continuing to employ the same for any length of time together.

In all these injections the different ingredients are in such proportions as best suit the general course of business. This was a point of much importance to ascertain, and so far as my observation goes, I have done so; but cases will, no doubt, occur from time to time, in which some variety of strength is necessary. All injections of this kind should be of such a strength as to excite some degree of irritation in the urethra, but by no means so strong as to create much pain: hence, where the preparations I have mentioned do not answer the purpose, they should be made stronger; and when of such a strength as to excite severe pain, they should be more diluted.

This, I may remark, is an object requiring much attention, for while it is obvious that injections must do harm when their strength is more than it ought to be, it is equally certain that little or no advantage will be derived from them when they are too weak. I have known a cure accomplished in three days, merely by making an injection of a sufficient strength, where the disease had previously gone on for two or three months, from want of attention to this point. I consider this, indeed, as one of the most important points in the treatment of Gonorrhœa, nor does any thing distinguish the practitioner of experience with such certainty, as his being able to adapt the strength of the injections which he employs to the particular circumstances of every case which falls under his management.

In the application of injections there are two circumstances which more particularly require attention, viz. the manner of throwing them up, and the frequency of using them.

They may be thrown up either with a small bag of *resina elastica*, fitted with a pipe, or with a common small syringe: whether the bag or syringe be used,

the pipe should be perfectly smooth, of a conical form, not above half an inch in length, and the cone of such a thickness near to the root, as not to allow the pipe to pass above a quarter of an inch into the urethra.

The bag or syringe being filled with the injection, and the patient seated with his breech over the side of a chair, so as to prevent the perineum from being pressed upon, the pipe, when well oiled, should be inserted into the urethra, as far as it will go, with the right hand, while, with the left, he grasps the penis, and pulls it forward upon the pipe. He must now throw the injection up in such a manner that it may reach the farthest part of the urethra that is affected, but not with such force as to excite pain.

When the discharge proceeds from near the extremity of the penis, very little force is required for this purpose; but when the upper part of the urethra is affected, if the injection be not thrown up with some degree of firmness, it will not reach the seat of the disease, and hence no advantage will be derived from it. Previous, therefore, to the use of injections, the part of the urethra, whence the discharge proceeds, should be ascertained, and it can be easily done in the manner we have mentioned above.

In using injections it is judged proper by some to desire the patient to prevent them from passing farther in the urethra than the seat of the disease; lest, by forcing some of the matter along with the liquid, the infection should be carried to parts which otherwise might not have been injured. For this purpose the patient must compress the urethra with the middle finger of his left hand, at that point to which it is meant the injection should go; while the syringe or elastic bag is employed for throwing it up in the other. But although there is necessity for throwing injections farther than the seat of the disease, there is no cause for this anxiety in preventing them. It does not appear, that in this manner, the infection is ever communicated from one part of the urethra to another; at least I have never met with an instance of it,

and I have seldom pointed out this to my patients as a necessary piece of attention. While it does not therefore, answer any good purpose, it certainly renders it more difficult for the patient to throw the injection properly up, as he cannot both make pressure upon the upper part of the urethra, and, at the same time, manage the syringe with that exactness which it requires.

The point, however, of most importance in the use of injections is, the frequency with which they should be thrown up; it is not enough that we discover a composition that will establish a cure, if we do not use it with that frequency which the nature of the disease requires. In common practice the patient is desired to inject the liquid two or three times a day: this, if the injection be of a proper strength, will in course of time effect a cure; but I am perfectly convinced, from much attention to the subject, that cures would be much more speedily obtained were injections to be more frequently thrown up. Instead of two or three times a day, I cause them to be used seven, eight, or ten times daily; by which the cure, instead of being protracted for several weeks, is often completed in as many days.

This, I must observe, is a point of such importance in the cure of Gonorrhœa, that nothing can compensate the neglect of it. The inefficacy of injections is frequently held forth as one material objection to them, but, for the most part, their failure will be found to depend, in a great measure, upon this circumstance. Patients ought, therefore, to be urged to use them, at least as frequently as I have mentioned. When indeed the discharge lessens, or disappears entirely, there is no necessity for using injections so frequently, but while it continues undiminished, the more frequently the remedy is applied to the parts from whence it proceeds, the more quickly will it be removed.

On laying injections aside, even after the running has disappeared entirely, and when there is therefore

cause to suppose that a cure is obtained, the discharge often returns with equal severity as at first, either from excess in wine, or over exertion in bodily exercise. In such circumstances the injections must again be employed, and used with as much frequency as before, care being taken not to leave them off till some time after the running has again disappeared.

When the discharge returns repeatedly it is apt to weaken and relax the parts so much, that this alone comes at last to constitute a new disease, forming a variety of what in general is termed gleet. This, however, requires remedies of a different kind, and will fall to be considered in a different chapter.

It will be remarked that I have only slightly taken notice of any other remedies in treatment of Gonorrhœa: I have purposely done so, from full conviction of the inefficacy of all remedies that are not immediately applied to the urethra, and from finding that a proper use of injections never fails to prove successful, where a cure by any means can be obtained.

Where much pain and inflammation takes place, I have observed above that some advantage may be obtained from blood-letting, and a strict attention to an antiphlogistic regimen. I think it right, however, to say, that few cases occur in which this becomes necessary. A patient under Gonorrhœa should live moderately, but by no means upon such low diet as in former times was prescribed in such cases. He ought to live in such a manner as may prevent the inflammatory symptoms from becoming severe, but not so low as to run any risk of inducing relaxation or debility.

The circumstances which most particularly require attention are, abstinence from all manner of connection with women, and from bodily exertion, such as much walking and riding on horseback, which more especially affects the parts concerned in this disease.

In the treatment of Gonorrhœa, where no injections are used, where the disease is either left entirely to nature, or treated with demulcents and purgatives,

a regular progress towards amendment is, for the most part, observed in the discharge. The matter from being thin, and of a greenish hue, or perhaps of a red colour from being tinged with blood, becomes of a thicker consistence, tough, ropy, and of a white or yellow colour: but where injections are employed this seldom happens. This natural process is thereby interrupted; and a cure often takes place without any change being perceived in the colour or consistence of the discharge.

There are some symptoms which occasionally take place in every stage of Gonorrhœa, and which, it might be expected, ought to have been more particularly noticed here, such as chordee, and evacuation of blood from the urethra. But these symptoms being attended with circumstances requiring a peculiarity of treatment, quite unapplicable in the ordinary state of Gonorrhœa, and being all of them highly important in their nature, a separate section will be allotted for the consideration of each of them. We shall now, therefore, proceed to consider the second stage of the disease.

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## S E C T. V.

### *Of the Second Stage of Gonorrhœa.*

IN this stage of the disease all the symptoms are more violent than in the first. The heat of urine is much more severe; the whole body of the penis becomes tender, and even painful; and chordee takes place to a very distressful degree. The matter discharged from the urethra is either of an ugly green colour, or deeply tinged with blood, and commonly very fœtid. It is found, on examination, to proceed from the more superior parts of the urethra, generally from about the middle of the perineum, where the patient complains of a smart pain upon pressure, and

where one or more small tumors are often perceptible, produced by the inflammation having extended to Cowper's glands.

Although the symptoms of the first stage of Gonorrhœa are commonly very distinctly marked, yet they frequently proceed to, and terminate in one of the other stages of the disease, particularly in this which we are now considering. This happens from the inflammation extending along the urethra, either from the matter producing the disease being more than usually acrimonious; from the effect of improper management on the part of the patient; from the imprudent use of irritating or very astringent injections; or from the patient being of a habit of body rendering him particularly liable to be acted upon by causes apt to excite inflammation.

I conclude that it happens most frequently from the first and last of these causes, or, perhaps, from a combination of them both; as in a great proportion of cases of this second state of the disease we find it taking place almost from the first day on which the running appeared. It must, no doubt, have fallen under the observation of every practitioner that this, as well as the third and fourth stages of Gonorrhœa, are often induced by the patient living in a state of riot and debauchery, and, in some cases, by the immoderate use of irritating injections. But although these are circumstances which in every case of Gonorrhœa ought to be rigidly guarded against, from their tending to excite one of the most distressful complaints to which the human species is liable; yet I am convinced, from what has been mentioned, that the worst states of the disease will frequently occur, notwithstanding of all that can be done either on the part of the patient or surgeon to prevent them.

As the practice in this state of Gonorrhœa is materially different from what we have recommended in the first stage of it, the utmost attention becomes necessary in distinguishing between them. In the first, the matter is, for the most part, discharged from

within an inch and half of the extremity of the penis; and where the disease does not extend farther up the urethra, although the ardor urinæ is sometimes considerable, yet the pain is never so severe as that which arises from the inflammation in the second stage of the disease. In this last, the whole body of the penis, as we have observed above, is tender and painful; the chordee which takes place is highly distressful, and one or more inequalities, accompanied with pain on pressure, are discovered in the perineum: whereas, in the former, any chordee which occurs is for the most part very moderate. The pain is considerable at all times when the patient is not passing water, and no hardness or inequalities are perceived in the perineum.

It is proper to remark, that even in the second stage of the disease, these glandular tumefactions in the perineum are not always at first obvious; but upon pressure with the fingers they are easily discovered, even on their first commencement; and in the more advanced stages of the disease they become perceptible, both to the touch and to the eye. Whenever chordee occurs in a severe degree, the whole penis acquires a firmness and tension, particularly where it runs along the perineum. This, however, is very different from the glandular affections to which I allude: the one is a diffused swelling, extending over the whole, or a considerable part of the penis; it does not continue fixed or permanent, and seems to depend upon a morbid irritability in the muscles of the penis, by which they are easily excited to violent and unequal contractions. The others are, at first, small, circumscribed swellings, painful to the touch, which do not rise and fall speedily, and which remain more or less permanent according as the symptoms with which they are connected are more or less violent.

These swellings proceed, as I have already observed, from an inflamed state of Cowper's glands, induced by the inflammation extending along their ducts, which terminate in the urethra, to the glands themselves.

Inflammation here, when it comes to a height, in a manner similar to what ensues from it in other parts, is very apt to terminate in suppuration; and as the formation of matter in the substance of these glands is apt to excite the most distressful consequences, nothing should be omitted that can tend to prevent it. When matter forms in them, if it be not immediately discharged by an external opening, it is very apt to burst into the urethra, and to produce runnings, which, in some cases, do not terminate but with the life of the patient.

On the first approach, therefore, of this second stage of Gonorrhœa, all our endeavours should be employed to remove or lessen the inflammation. If the patient is plethoric he should lose a considerable quantity of blood with the lancet, and ten or a dozen leeches should be applied to the pained part. Whatever his habit of body may be, the application of leeches should not be omitted, and they ought to be repeated once and again, according to their effects, and to the degree of inflammation and swelling which take place; saturnine poultices should be applied over the part affected, the bowels should be kept open with gentle laxatives, and the patient should be put upon a low, cooling diet.

If, either by the violence of the inflammation, or by an imprudent use of astringent injections, a stop has been put to the discharge, much advantage will be derived from our soliciting a return of it. This however, must not be done with applications of an irritating nature, such as bougies, and stimulating injections, as some have advised, but it may be attempted with safety by throwing up, from time to time, injections of warm oil and other emollients, such as warm decoctions of lintseed and althea.

But although we find from experience that much harm is done by the application of stimulants directly to the urethra, we know that they may be applied to the skin both with safety and advantage. Thus, when the swelling does not soon lessen, by bloodlet-

ting and the other remedies mentioned above, I have, in different instances, derived advantage from the application of blisters to the parts affected, and by covering the bites of the leeches with adhesive plaster; this practice may be adopted even the day after they have been applied. The blister should be made to cover the whole perineum.

When the remedies we have advised are timeously and properly applied they will not often fail to remove the inflammation; but when this is not accomplished, and when the swelling or swellings proceed to a state of suppuration, nature should be as much as possible assisted by a frequent and free use of emollient poultices and fomentations, and as soon as a fluctuation of matter is discovered, it ought to be discharged by an opening made the full length of the tumor. In this manner a sore will be produced that will be difficult to heal; but if the habit of body be sound, a cure will be obtained at last, and there is no other method with which I am acquainted that will so readily prevent the matter from bursting into the urethra.

When this unfortunate circumstance takes place, of matter collected in one or more of these glands, finding access to the urethra, scarcely any advantage is to be derived from art in the treatment of it. Injections, as we remarked in the last section, instead of proving serviceable, rather do harm. They cannot reach the cavity of the gland, where alone they might prove useful, and by preventing for a time that free discharge of matter, which, in every abscess is desirable, they cause it to collect, and alternately burst, out, in greater quantities than before.

When the cause of such an occurrence is not suspected, both the patient and practitioner are apt to imagine that it proceeds from the fault of the injection: every variety of the remedy is therefore employed, but nearly the same effect results from all of them, and the patient, after being teased and perplexed for a great length of time, finds himself in no degree better than he was at first.

By some practitioners a course of mercury has been advised in this state of the disease, and particularly frictions with mercurial ointment on the perineum; but although I have often seen the practice fairly and completely tried, I never knew any advantage derived from it. Neither does mercury prove useful in the sores which ensue from opening abscesses in the perineum, proceeding from Gonorrhœa. On the idea of these sores being of the same nature with such as succeed to buboes in *Lues Venerea*, mercury is commonly prescribed; but although I have known it repeatedly used, not only for the cure of these sores, but for the discussion of the previous tumefaction of the glands, I never knew any evident benefit derived from it.

All that in such circumstances can with propriety be done is, to cause the patient to live in such a manner as will most effectually brace his constitution; his diet ought to be of a nourishing kind; cold bathing, particularly in the sea, proves sometimes useful, and, in some instances, Jesuit's bark, in large quantities, is given with advantage.

In no period of this state of Gonorrhœa are injections admissible, and I suspect that the discredit into which they have fallen with many is owing to their being employed promiscuously in every state of the complaint. We have just seen that they cannot be used with any prospect of success, when suppuration has actually taken place, and a very little attention will make it appear that they ought not to be advised during the inflammatory state of the complaint. While the parts are inflamed, instead of endeavouring to remove the discharge, we ought rather to try to promote it. Nothing tends with such certainty to moderate all the symptoms; and I have repeatedly observed that they are all rendered much more severe by whatever tends, in any degree, to give a check to the running. It is proper, therefore, that the younger part of the profession be put strictly on their guard against the use of injections in every period of this stage of Gonorrhœa; a practice which, in the first

stage of the disease, is the only remedy, as we have seen, upon which any dependence ought to be placed, but which in this is evidently fraught with danger to the patient, and therefore with discredit to those who advise it.

Besides the glandular abscesses of these parts, which we have just described, collections of matter are apt to occur in this state of the disease, not only in the cellular substance of the perineum, but in the corpus cavernosum of the penis, as well as in the corpus spongiosum urethra. The treatment of these, however, ought to be so exactly what we have pointed out for the others, that nothing farther need be said upon it. To prevent, as much as possible, the risk of such collections bursting into the urethra, the matter should be discharged by a free opening the whole length of the tumor, as soon as it is found to be completely formed.

When collections of matter in these parts, whether seated in Cowper's glands, or in the contiguous soft parts, terminate, as they sometimes do, in external openings, at the same time that a communication is formed with the urethra, the urine escapes at the fore, and thus another disease is produced, termed a sinus, or fistula in perineo. This falls to be treated like sinuses in every other part: the seat of the abscess must be laid open from one end to the other, and by enlarging the opening in the urethra, if the patient be otherwise in sound health, a cure will, for the most part, be obtained, by endeavouring to heal the sore from the bottom in the usual way\*.

It may be alledged, if this proves successful where the matter has already formed an opening, both inwardly and outwardly, for itself, that a similar practice should be adopted where the abscess has only burst into the urethra. That a free incision should be made into it, and a cure attempted in the manner we have already advised.

\* V. System of Surgery, chap. xv.

Where the opening into the urethra is such as to admit the urine to pass into the abscess, the practice to which I allude ought undoubtedly to be adopted, for no other will prove successful, and the patient must remain in a state of great distress and misery while this continues; but while the external teguments remain entire, and while the urine does not find access to the abscess, no attempt of this kind ought to be made. However inconvenient the discharge of matter from the urethra may be, and however long it may continue, the patient ought rather to submit to it than to the uncertain event of a fistulous opening, which always proves tedious and distressful, with whatever judgment the disease may be afterwards treated.

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## S E C T. VI.

### *Of the Third Stage of Gonorrhœa Virulenta.*

IN this stage of Gonorrhœa, along with ardor urinæ, and the other ordinary symptoms of the disease, the patient complains of a severe fixed pain in the upper part of the perineum, accompanied with a sensation of fulness, and tension in all the parts contiguous to the anus. The desire to void urine is more frequent than in either of the two preceding states, and it is commonly passed with much pain and difficulty; often drop by drop. Tenesmus, or a painful and frequent desire to go to stool, often takes place, and, in some instances, to such a distressful height, as adds greatly to the misery of the patient.

Even in the commencement of the disease the pain in making water is in some cases so severe as to excite heat and other symptoms of fever; and, in the more advanced stages of it, I have known the fever rise to a very alarming height. This state of Gonorrhœa, in some instances, proceeds from the inflammation spread-

ing backward in a slow, gradual manner, from the point of the penis, which we have shewn to be the seat of the first stage of the disease, but more frequently it takes place suddenly either from the imprudent use of injections, from the patient being in a riotous course of life, or from his being exposed to violent exercise, either on foot or on horseback.

On examining the parts affected, the penis is, for the most part, in a state of tenderness and irritability, nearly, indeed, as we have described it to be in the second stage of this disorder; but, together with this, on compressing the parts about the end of the rectum a sense of pain arises, which is never experienced in either of the states already described, and on introducing the finger into the anus, the prostate gland is found considerably swelled, and in such a state of irritability that it can scarcely bear to be touched.

Even the slightest degree of this affection excites much uneasiness, and the desire to pass water seldom ceases for above a few minutes together; but when the disease has been of long duration, the prostate gland, which nearly surrounds the urethra, or which rather appears, as it were, to form the passage of urine at this part, becomes often so much swelled as nearly to obstruct the discharge of urine as completely as when the urethra is entirely stopped. Those, indeed, not versant in this branch of practice are apt to mistake this affection for strictures in the urethra; of course a delay takes place in using the proper remedies, and attempts which are frequently made to overcome the supposed strictures, too often do mischief. Frequently, indeed, neither a bougie, nor catheter, when employed for removing a suppression of urine, proceeding from this cause, can be passed; for the gland is in some cases so much swelled as to obliterate the passage almost entirely, and in others, by swelling on one side only, the passage is thrown altogether over to the other; circumstances which render the introduction of a bougie either impracticable, or at best difficult and uncertain.

As it is in the commencement only of this affection that any material advantage is derived from the interference of art, and as it is a disease which, in the more advanced states of it excites the greatest possible distress, we ought instantly on the first approach of it, to apply such remedies as experience has proved to be the most effectual in removing it.

Of all the remedies that I have ever employed, early blood-letting is almost the only one from which any obvious advantage has been derived. It ought to be advised immediately on the first approach of pain, nor should we be deterred by a weakly or delicate constitution. In a person of this description the evacuation ought, no doubt, to be more sparingly administered than where plethora takes place; but even in the most delicate habit of body, a quantity of blood should be discharged in proportion to the strength of the patient, in the first place by the lancet; and afterwards by leeches applied to the parts affected. The practice of blood-letting I consider to be equally necessary here as in cases of pleurisy: in the latter, indeed, the life of the patient is in greater hazard, but in this his future comfort and enjoyment of life are at stake. It ought not, therefore, in any instance, to be omitted.

I speak the more decidedly upon this from various instances having fallen within my own observation, of the most distressful consequences taking place from this remedy having been omitted, and from many others having ended easily where it was employed with freedom. It is in the first stages only of the disorder, however, in which it acts with much advantage; chiefly, indeed, on the first symptoms of inflammation taking place, for when the prostate gland becomes swelled and inflamed in any considerable degree, neither this nor any other remedy can be depended upon for removing it. After a long course of time an enlarged prostate will sometimes be found much diminished, but this happens more frequently without our being able to account for it, than as a

necessary consequence of any medicine employed for it.

Blisters do not afford that relief here that we sometimes derive from them in swellings of Cowper's glands, neither is much advantage ever obtained from saturnine applications. Opium, whether given by the mouth, or in clysters, proves more useful than any other remedy for removing the pain and lessening the irritation; but probably from coming more directly into contact with the diseased parts, it proves evidently most successful when given in clysters, and it seems to answer better in small doses, frequently repeated, than in large quantities given at once. Thirty drops of laudanum, mixed with two ounces of thin starch, and thrown easily into the rectum, very commonly gives immediate relief, and as long as this dose proves effectual it ought not to be increased.

While opiates, given in this manner, lessen the irritability of the organs of urine, they also give much relief by removing that painful and frequent desire to go to stool, with which patients in this disease are often afflicted.

Hitherto I have said nothing of the use of injections, which are frequently employed in this, as in other stages of Gonorrhœa, for removing the running. This, however, is a practice that ought by no means to be adopted. It has at first been gone into without reflecting upon its tendency, and afterwards persisted in merely from having once been adopted. In the second stage of Gonorrhœa I had occasion to remark that the discharge, instead of being stopped, ought rather to be encouraged. The same observation applies still more forcibly here, where a stoppage of the running tends always to aggravate every symptom, and where we find considerable relief often obtained by our bringing on a return of it. This, as we observed in the last section, should rather be done by the use of warm emollient injections, than by such as stimulate and give pain. These, I know, are advised for this purpose, but as I have known them evidently do much

harm, even when managed in the most cautious manner, and as we find, indeed, that the disease is often at first induced by this very practice, I do not hesitate to say that it ought very universally to be laid aside. For a similar reason bougies ought never to be employed here.

Emollient injections prove useful not merely by soliciting a more plentiful discharge from the urethra, but by soothing the irritability in the parts affected, and thus lessening the pain; and where opiates are conjoined with them they act still more powerfully in this manner. An infusion of the heads of poppies and althea root, used warm, answers particularly well for this purpose. Warm poultices, applied externally over the fundament and perineum, also prove useful. Some advantage too is derived from warm fomentations; and I have known the warm bath afford much relief.

All these remedies, however, act as palliatives only; but by their use the present distress may be much mitigated, while nature, in the course of time, aided by cautious management on the part of the patient, may at last accomplish a cure. At least, this, in the course of my observation, has happened in several instances where the swelling of this gland has not arrived at any great height; but it has been more frequently the consequence of rigid attention to regimen than the effect of medicines. We constantly find, in this complaint, that whatever excites much heat of body does harm; whether bodily exercise, or heating food and drink; hence every thing of this kind should be avoided, particularly much walking and riding on horseback; and full meals of animal food, especially when wine or other strong drinks are likewise indulged in. The diet should consist of milk and vegetables, with no greater proportion of animal food than is necessary to support the strength of the patient.

Such drinks should be chiefly used as tend to blunt the acrimony of the urine, and to sheath the parts which it passes over; such as infusion of lintseed and althea,

emulsions of almonds, and water in which gum arabic is dissolved.

I have insinuated that I have little confidence in the activity of any medicine for removing swellings in the prostate gland; when it has unfortunately acquired a considerable bulk. A deference to the opinion of others requires that I should state the grounds upon which this opinion is formed; this I shall do in noticing shortly the medicines which have been employed with the view of obviating this complaint.

When other remedies fail, and in some cases even before they are fairly tried, mercury is, in ordinary practice, recommended; but I have much reason to think that it very commonly, if not always, does harm.

Even in early practice I had frequent opportunities of seeing this complaint, and being led by conversation with others to expect substantial relief from mercury, I used it freely for several years: I must acknowledge, however, that I never perceived any advantage arise from it, while, in some cases, evident mischief was the effect of the practice.

Mercury never had any obvious effect in diminishing the tumour, and by encreasing the irritability of the system; even when given in small quantities, and in the most cautious manner, it usually rendered the parts affected more painful than they were before. On these accounts mercury appears to be not only an useless but a dangerous remedy, so that I have now, in swellings of this gland, laid it entirely aside.

Cicuta has also been much recommended in swellings of this gland; but although I have given it very full and complete trials, I am not sure that in any instance it ever proved useful. The disease, in some, has appeared to yield while cicuta was employed, but this was only where a great length of time had elapsed, and not in a greater proportion of cases than where this remedy was never used. But as it may be employed under proper management without any risk to the patient, where other remedies do not succeed, and where it is necessary to be doing something, it may be

proper to give it a farther trial before any final opinion is formed of it.

Having, in tumours of other parts, observed obvious advantages from a decoction of the root of mezereon, I have, in various instances, used it in swellings of the prostate gland. In some it has appeared to prove useful, but never so evidently as to enable me to speak with certainty about it. When conjoined with a *sarsaparilla*\*, it seems, in other cases, to be rendered still more active, and the mucilage contained in that root, by blunting the acrimony of the mezereon, renders it both more agreeable to the palate and more grateful to the stomach.

Among other remedies employed in swellings of the prostate gland, sea bathing and drinking sea water has been one of the most frequent. Where this disease is connected with a scrophulous constitution this remedy certainly proves useful. It will never remove the tumour speedily; but, by strengthening the constitution, it seems, in such circumstances, to render the swelling less permanent than it usually proves to be where this remedy is not employed. It ought, however, to be remarked, that all strong purgatives do much harm. This happens in every stage of Gonorrhœa, but especially where the prostate gland or bladder are affected. By the irritation which they excite they not only induce a more copious discharge, but render the inclination to void urine much more frequent and more painful. When salt water is used, therefore, it ought not to be in greater quantities than will answer as very gentle laxatives.

Swelling of the prostate gland does not terminate as tumours in the other glands of the urethra frequently do, in suppuration. When Cowper's glands, or any of the smaller glands of the urethra become inflamed, they either suppurate or a cure is obtained by discussion: but, in similar affections of the prostate this very seldom happens. When the tumour does

\* Vide Appendix, No. 45.

not yield to timeous blood-letting, or when it does not afterwards gradually subside, it either remains nearly of the same size and hardness, or becomes both larger and firmer till it ends in a real schirrus, of considerable magnitude.

In this state of the disease the discharge is, for the most part, thin and acrid; together with matter from the contiguous parts of the urethra, which are usually more or less diseased, a considerable quantity is thrown out of the gland itself, forming, as we will afterwards see, one of the most obstinate varieties of gleet.

Even in the commencement of this affection of the prostate, the passage of urine, as we have already remarked, is often much obstructed; but, in the more advanced stages of it, this, in some cases, comes to such a height as to be unsurmountable. Whether from the passage being completely obliterated by the sides of the swelled gland adhering together, which is alledged to happen, but which I never saw, or from the passage being contracted by the sides of the gland swelling unequally, it sometimes happens that neither a bougie nor catheter can be introduced. In this case, as a total obstruction is formed to the passage of urine, we are obliged to draw it off by puncturing the bladder, which may either be done above the pubes, or by passing the trocar into the bladder from the rectum, or pushing it up by the side of the diseased gland\*. It must be remarked, however, in forming an opening with a trocar for drawing the urine off from the bladder, that a very enlarged state of this gland precludes every attempt for this purpose either in the perineum or rectum. In which case it must necessarily be done above the pubes.

In such circumstances, all that art can do, is to preserve a passage for the urine, by retaining a canula in the opening, and keeping the patient as free from pain as possible with doses of opium adequate to the distress in which he happens to be.

\* Vide System of Surgery, chapter xiii.

## S E C T. VII.

*Of the Fourth Stage of Gonorrhœa.*

IT sometimes happens that the inflammatory symptoms pass easily over the anterior part of the urethra, and shew themselves in more force and violence higher in the passage. Thus, although the third stage of the disease, in which, as we have seen, the prostate gland is chiefly affected, is sometimes produced by the inflammation spreading from those parts which are only concerned when the second stage of it takes place, yet instances often occur of the inflammation passing from the point of the urethra along the whole course of the passage, without any intermediate part of it being much affected, and fixing in the most violent manner, upon the prostate gland or bladder. In some cases the prostate is affected while the bladder itself remains sound, while in others it passes easily over that gland, and seizes with much violence upon every part of the bladder.

In some cases the bladder becomes affected almost on the first attack of the disease. The inflammation spreads so quickly along the urethra that the bladder is pained in the course of a few hours from the commencement of the discharge. It more frequently occurs, however, after the running has been of some duration, and, for the most part, can be traced as the consequence of much exposure to cold and dampness; of violent exertion in walking or on horseback, or, as the effect of an injection thrown with too much violence into the upper part of the urethra.

The patient, from the first approach of the disease, complains of much uneasiness, which at last terminates in severe pain over all the region of the bladder, particularly about the neck of it; accompanied with a frequent and painful desire to make water, and of-

ten with tenesmus. In some cases the pain is chiefly seated about the anus, but, in general, all the under parts of the abdomen, particularly about the region of the pubes, are greatly pained, and in some instances, even the kidneys become affected, either from nervous sympathy, or from the inflammation spreading from the bladder along the ureters.

In general the pain, especially after voiding urine, extends to the glans penis, and as this, with the stoppage which occurs to the flow of urine, are symptoms which always accompany stone, cases of this kind, when the history of the disease has been concealed, has been mistaken for stone in the bladder.

If the running from the urethra has not been stopped by injections, it continues as if no affection of the bladder had occurred; and in general any interruption that takes place to the discharge proves only temporary; but along with the usual running from the urethra, such as takes place in one or other of the different stages which we have described, a considerable quantity of matter passes off with the urine. This gives the urine a turbid appearance, as if purulent matter was mixed with it, but on examining the deposition, which is usually made in the course of a few hours, it is found to consist almost entirely of mucus.

On a further continuance of the disease this matter contained in the urine assumes a very different appearance. Instead being broken and divided into flakes, as at first, it now becomes tough and viscid, in a very remarkable degree, resembling isinglass diluted with water to the consistence of jelly. This geletaneous matter is suspended in the urine when first voided, but it soon separates, and falls to the bottom, where it adheres so firmly to the sides of the vessel in which it is received, as to be separated from it with difficulty. In some cases this substance is clear and transparent, but, for the most part, it is tinged of a yellow hue, and somewhat opaque.

When any considerable quantity of this matter has

passed off the patient is commonly relieved, and continues easy for a longer or shorter period, according to the degree of inflammation that takes place.

In some cases the quantity of this viscid matter is very inconsiderable, being no more than what slightly covers the bottom of the pot, while in others it seems to form more than half of all that comes from the bladder. When in such considerable quantities, it tends greatly to reduce the strength of the patient, inasmuch that few constitutions are able to bear it long.

From the nature of the parts in which this disease is seated, we would expect that it should be the most formidable complaint that Gonorrhœa could induce; but this is by no means the case: the disease described in the last section, viz. swelling of the prostate gland, proves always more so. Few recover from the one, while cures are obtained by a great proportion of all who are seized with the other. At least in healthy constitutions this commonly happens, if the disease has not been much neglected at first. In general, indeed, a considerable time passes over before a perfect cure is obtained; nay, some degree of uneasiness, and certain deranged sensations, will often continue for a number of years, but after the first violence of the symptoms is over, they generally become, in a gradual manner milder, till at last they vanish entirely.

On the first approach of the disease blood-letting is the only remedy upon which most dependence ought to be placed, and, when freely practised, it seldom fails to render the symptoms moderate, and of shorter duration than they otherwise probably would be.

A quantity of blood should be taken with the lancet in proportion to the strength of the patient, a number of leeches should be repeatedly applied to the neighbourhood of the anus. With respect to diet, and other circumstances, the patient ought to be treated in the manner we have advised in the last section. His bowels should be kept moderately open with castor oil, or other gentle laxatives, and opiates

should be exhibited in sufficient doses for lessening, or even for removing the pain. When treating of swelling of the prostate gland we advised opiates to be given in the form of clysters, rather than by the mouth, and this mode of exhibiting the remedy proves equally useful here.

With a view more certainly to allay the irritability of the bladder, it has been proposed to inject opium dissolved in water into it: but this appears to be a dangerous experiment. I have known it done, but the patient was nearly killed by it. Convulsions and other alarming symptoms occurred, but not in such degree as to prove fatal.

Warm emollient injections, such as warm oil, or the form of injection in the Appendix, No. 23, frequently give relief from pain, and give a temporary suspension of that constant desire to pass water which often prevails here; and in some cases the semicupium proves successful when these have failed.

A plentiful use of mucilagenous drink, such as infusion of lintseed and althea root, and a solution of gum arabic in water, afford relief in all affections of the urinary passages, but in none more than in the one of which we are now treating.

All these remedies are meant to alleviate pain and irritation in the commencement of the disease, and when timeously applied, and duly persisted in, they very commonly prove effectual, but in the more advanced stages of the disease, when the pain is not so severe, but when a good deal of uneasiness continues, accompanied with a discharge of that viscid matter which we have described, remedies of this kind do not afford so much relief. Opiates will no doubt tend at all times to allay irritation, by blood-letting, which at first never fails to give relief, tends now only to weaken the patient, without being productive of any advantage.

In this situation Jesuit's bark sometimes proves useful; and I have seen instances where a few grains of allum added to each dose, seemed to render it more ef-

fectual. Balsam of copaiba, and Canada balsam, prove likewise useful here: but where much benefit is expected from them they should be given in as large doses as the stomach of the patient will permit.

Of all the remedies, however, which in such circumstances I have ever tried, uva ursi is the most effectual. No advantage is derived from it where the prostate gland is diseased; but in unmixed affections of this kind, where the bladder only is affected, it seldom fails to procure relief. It may be given to the extent of a scruple at first, and afterwards half a drachm of the powder three times a day, in which quantity it seldom fails, in the course of a few days, to lessen the proportion of viscid matter in the urine; by which, and the abatement of pain which at the same time takes place, we are always certain that the inflammation also is diminished.

On the idea that this affection of the bladder proceeds from a translocation of the matter of Lues Venerea from the urethra, mercury is commonly used in it; but although I have often given it, I never knew any advantage derived from it; it sometimes even does harm. It increases the irritability of the system in general, as well as of the parts more particularly affected.

When affections of this kind have continued long, the bladder is apt to become much thickened and lessened in diameter: hence, even after all the other symptoms are gone, the frequent inclination to pass urine continues. In some cases this goes on for years: nay, I have known it endure for a great length of time, and only terminate with the life of the patient. It seems evidently to be the effect of inflammation, for it succeeds to inflammation of the bladder, by whatever cause it may be induced. It also occurs from strictures in the urethra, when they happen to be considerable and of long duration.

For the removal of this thickened state of the coats of the bladder mercury is often prescribed, and in some cases it has certainly proved useful; but it

seems to prove equally so from whatever cause the disease may at first have arisen\*.

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## S E C T. VIII.

### *Of Chordee.*

CHORDEE is a painful, involuntary erection of the penis. Patients in every stage of Gonorrhœa are, in some degree, liable to Chordee; but it occurs much more frequently, and to a much greater height in the second stage of the disease, than in any of the others. It happens at all times of the day, but most frequently when the patient is warm in bed, when it is in some instances so severe as to deprive him entirely of rest. During a fit of Chordee the penis becomes hard and painful to the touch, and for the most part it is curved downwards in a considerable degree.

Chordee occurs in every period of this stage of Gonorrhœa, and it sometimes remains after the heat of urine and all the other symptoms are gone, but it is usually most severe during the continuance of the inflammation, and becomes more or less so according as that symptom is in a greater or lesser degree.

I therefore conclude that Chordee is an effect of inflammation, and that it proceeds from irritation, communicated from the nerves of the urethra to those of the contiguous muscles, by which those unequal degrees of contradiction are produced over the whole substance of the penis, which universally take place in this disease.

Were it owing to effusions of lymph into the re-

\* This practice of giving mercury in the thickened state of the urinary bladder which succeeds to inflammation, we find recommended by the late Doctor Ebenezer Gilchrist of Dumfries, to whom we are indebted for much valuable information in different parts of the practice of medicine.

ticular parts of the penis, as some have imagined to be frequently the case\*, Chordee would be of a more permanent nature than we ever find it to be, and these effusions would be apt to terminate in suppuration. Now, although suppuration is sometimes the consequence of inflammatory tumours in these parts, I have never observed that it happens in those tumefactions which accompany Chordee. The latter commonly rise and disappear again in the course of a few hours, and they are more diffused than tumours usually are which proceed to suppuration. The others rise more slowly, and they terminate, whether by dispersion or suppuration, in a much more gradual manner.

Of all the remedies I have ever employed opiates prove most useful in Chordee. The pain and tension are sometimes removed by rubbing the parts affected with laudanum, or with a strong solution of opium in water, and by keeping pledgits immersed in either of these, constantly applied to them; but the greatest advantage is obtained from the internal exhibition of opium. Thirty or forty drops of laudanum, given at bed-time, or on the accession of the Chordee, very seldom fails in preventing or removing it.

Emollient injections thrown up the urethra, particularly when impregnated with opium, have also a powerful influence in lessening the violence of Chordee; and as the heat and irritation produced by costiveness tends greatly to augment the violence of this symptom, I have known much advantage obtained from the operation of a gentle laxative.

A temporary relief is often derived from the application of a cold solution of saccharum saturni and I have known the external application of camphor prove serviceable: when dissolved in spirit of wine it proves useful, but it acts with more advantage when dissolved in oil. Frictions with mercurial ointment have been much recommended for the removal of Chordee, but as I have commonly found more ad-

\* V. John Hunter on the Venereal Disease.

vantage from rubbing with camphorated oil, I conclude that it is chiefly the emollient properties of the mercurial ointment which render it useful, and, therefore, that the inconveniencies which sometimes occur from mercury, may here be avoided.

In some cases we derive advantage from tying the penis down with a fillet to the thigh, but it only answers in very slight affections, and the practice ought never to be advised in the more severe attacks of the disease. Being an obvious remedy for counteracting an erection, it is not unfrequently employed in the first instance by the patient; but I have frequently known it do harm, either from the fillet being applied too tight, or from the parts being in such a state of tenderness as to render it altogether inadmissible.

When none of these remedies succeed, blood-letting sometimes proves useful; particularly by the application of leeches to the parts affected, nor ought this ever to be omitted when the patient is of a plethoric habit, or when the pulse is full. When Chordee takes place in a slight degree only, blood-letting is never necessary; but whenever it is severe, and resists the other remedies we have mentioned, we ought never to hesitate in advising it. Blood-letting proves more effectual than any other remedy in preventing that permanent kind of Chordee, which sometimes continues very distressful long after every other symptom of Gonorrhœa has disappeared.

Opium is one of our most effectual remedies in every stage of this symptom, but particularly where it has been of long continuance. In this state of the disease I have sometimes found, where opium has failed, that hen-bane, the *hyocyamus niger* of Linnæus, has proved useful. A grain of the extract, properly prepared, may be given three times a day at first, and the dose increased to two, three or more grains, according to its effects. I have given to the extent of seven and eight grains three times a day, with no inconvenience whatever; but this was after the patient had been for some weeks accustomed to the remedy.

## S E C T. IX.

*Of Hæmorrhages from the Urethra.*

IN the description of the disease, we have seen that the matter of Gonorrhœa is frequently tinged with blood. When the quantity of blood is inconsiderable little or no notice is taken of it, the matter gradually acquires the common appearance, and a cure is accomplished in the usual way; but when a blood vessel of any magnitude bursts in the urethra, as sometimes happens when the inflammation runs high, such quantities of blood are discharged as prove highly alarming. I have known different instances of three or four pounds of blood being discharged in the space of a few hours.

On the first appearance of this symptom complete rest should be immediately recommended, for nothing tends more to promote hæmorrhages of every kind than bodily exertion. The patient's bowels ought to be opened with a gentle laxative; his diet should be of a cooling nature; he ought to be kept in a cool, well-aired apartment, and the penis should be immersed, from time to time, in a cold solution of cerussa acetata, in equal parts of vinegar and water.

In Hæmorrhages of every kind I have derived more advantage from a plentiful use of kino, and particularly in the symptom which we are now considering. It may be given in the quantity of twenty grains four times a day, and it may be used either by itself, or rubbed with equal parts of gum arabic and fine sugar, which renders it both more palatable and more grateful to the stomach.

In some cases I have derived advantage from astringent injection; particularly from an infusion of red rose leaves, strongly impregnated with allum, as in No. 21, and from No. 14\*, of which balsamum co-

\* Vide Appendix.

paiba forms the basis. The injections should be thrown up with caution, and retained by compressing the urethra as long as the patient can bear them.

When all these means fail, and when there is cause to suspect that the patient's life may be endangered by the loss of too much blood, recourse must be had to pressure. I have, in different instances, put an immediate stop to the discharge by inserting a bougie into the penis. When the bougie is large nothing farther is necessary; but when it does not prove successful of itself, if the discharge proceeds from the fore-part of the penis, it may be stopped at once by gentle pressure with a narrow roller, when it flows from the perineum, by continued pressure with the hand or fingers.

With a view to obtain a long continued pressure, a catheter of elastic gum may be used instead of a bougie, by which the patient may, with due care and attention, void his urine while the pressure is continued: but if the bladder is emptied immediately before the bougie is introduced, it may, for the most part, be retained as long as is necessary.

Having in this and the preceding sections considered Gonorrhœa in the different forms under which it occurs in men, we shall now offer a few observations upon the same disease as it appears in females.

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## S E C T. X.

### *Of Gonorrhœa in Women.*

WOMEN are less susceptible of this disease than men; and with them it is also less violent in its symptoms, and less alarming in its consequences.

Why men should be more readily infected than women is difficult to explain; but that the disease should prove more violent in the former is evident. The parts which it attacks are more numerous, and more

deeply seated ; and we find that all the symptoms of this disease are mild or severe according as the parts affected are deeply seated, or otherwise. Hence, as long as the extremity of the urethra only is affected, the symptoms of Gonorrhœa are equally violent in both sexes. During the continuance of the first stage of the disease in men, the pain is never more severe than we often meet with it in women, nor does it ever become so till the inflammation proceeds to a greater depth.

In women the discharge proceeds either from the vagina or urethra, and in some cases, partly from both. When the vagina only is affected the pain attending it is inconsiderable, unless the matter is so acrid as to inflame the clitoris, nymphæ, or labia pudendi, as we sometimes find is the case ; but whenever the urethra is the seat of the disease, the same degree of ardor urinæ takes place as usually occurs in men. Nay, in women this symptom is often more severe, and the inflammation by which it is produced proceeds more readily and more frequently in them to the bladder than it usually does in men ; for, in most instances of Gonorrhœa in women, they complain of severe pain over the loins, and all the region of the bladder, and their urine very commonly deposits mucus in such quantities as indicates a considerable affection of that viscus.

This must happen from the passage to the bladder being considerably shorter in them than in men ; and the urethra being wider and not so liable to be obstructed, the symptoms arising from affections of this part are neither so severe, nor are they usually of such long continuance.

On examining the seat of Gonorrhœa in women, it is often difficult to determine whether the disease exists or not, and if the patient is inclined to conceal any circumstances connected with her situation, it is altogether impossible to ascertain this point with precision. This uncertainty occurs from the similarity of Gonorrhœa to the matter of fluor albus a disease to

which women are so very liable, that, in some degree, scarcely any but the most robust are at all times free of it. Besides a similarity in the matter, the heat of urine, and inflammation of the contiguous parts, are often equally severe in the fluor albus as they commonly are in Gonorrhœa.

The chief distinction which external appearances afford between the two diseases, is, that in fluor albus the matter is of a whiter colour than in Gonorrhœa. In the latter it is somewhat of a cream colour, whereas in fluor albus it is usually of a pale white colour, and of a thinner consistence. It must, however, be acknowledged, that these means of distinction are by no means sufficient, and that no certainty upon this point can be obtained but by a full account being received from the patient herself of all the circumstances connected with the case. When a woman is seized with heat of urine, and a discharge of matter from the parts of generation, and at the same time admits that these symptoms succeeded to her connection with a man labouring under Gonorrhœa, no doubt will remain of the nature of the disease: but when a patient inclines to conceal the real cause of her disorder, no means with which we are yet acquainted are sufficient to ascertain the difference between these two diseases.

It fortunately, however, happens, that the remedy which answers with most certainty in the one, proves equally powerful in the other: the remedy I allude to is an astringent injection. All the variety of injections enumerated in the foregoing sections may be used with equal propriety here: but it is chiefly the vitriolic solution, No. 18, upon which much dependence should be placed. When duly persevered in, and thrown up five or six times a day, it seldom fails, in women, to accomplish a cure of Gonorrhœa, and it proves equally successful, as I have observed above, in removing the fluor albus.

Where, indeed, the constitution is much debilitated, and where the discharge is kept up by general relaxa-

tion of the constitution, although injections may remove the running, they will not prevent a return of it; but from much experience of their influence I can recommend them as one of the most powerful remedies that has yet been used for this very distressful symptom, to which a great proportion of the sex are liable.

In females injections may be used with the greatest freedom, when the discharge proceeds from the vagina; but in throwing injections up the urethra more circumspection is necessary than is even required in men. The urethra in women being short, and the sphincter of the bladder more easily forced, if injections are thrown up with violence, they will readily pass into the bladder; and as this might be productive of much irritation and pain, it ought to be carefully guarded against. With proper attention this is easily done; and as the running proceeds, for the most part, from within half an inch of the extremity of the urethra, there is no necessity for throwing injections farther.

Where the disease is entirely confined to the urethra or vagina a cure may always be accomplished by injections; particularly if these be accompanied with a proper attention to diet, and to the state of the bowels: but where the bladder is already affected, other remedies are required. The patient must lose blood in quantities proportioned to her strength; the diet should be very low; her bowels should be kept easy with gentle laxatives; and the pain and irritation should be lessened or removed with doses of opiates proportioned to the violence of these symptoms.

In women the mucous glands of the parts affected are apt to inflame, although not so frequently as in men, nor are the consequences which result from them so apt to prove permanent. This may happen from none of these glands being so large in women: hence, when they swell from inflammation, they do not arrive at such a bulk, and when they suppurate, the abscesses which ensue more easily heal. They

are chiefly situated in the labia pudendi, and in the vagina.

Swellings of this kind in women require the same method of treatment as in men. Blood-letting, both general and local, should be advised on the first appearance of the tumours, and the parts affected should be kept covered with a cold solution of saccharum saturni in water and vinegar. When this fails in preventing their increase, warm emollient cataplasms should be advised, in order to forward suppuration; and this taking place, the tumour should be laid open with a free incision from one end to the other.

Where tumours of this kind arrive at a larger size than usual, I have, in different instances, both in men and women, discharged the matter by the introduction of a seton. But as setons are not easily managed in this situation, the mode of opening them by incision should be preferred; and it will commonly be found that it answers best to lay the abscess open through its whole length.

In the treatment of Gonorrhœa in women there are some who uniformly prescribe mercury, although they never advise it in men. This they do from an idea of its being more frequently connected with Lues Venerea in women than in men.

I have not found, however, that this is the case, or that there is cause for mercury being given for this disease in women more than in men. Gonorrhœa often takes place in women as it does in men along with Lues Venerea: in such circumstances mercury must no doubt be employed; but by no means on account of the Gonorrhœa. So far as my observation goes, the disease is to be cured in both sexes in the same manner, chiefly, as I have already remarked, by the use of astringent injections.

It happens, indeed, in women, as it does in men, that Gonorrhœa, particularly the milder forms of the disease, will disappear whether injections are used or not. This in former times, was attributed to the purgative, demulcent, and astringent medicines, which in all cases were used in large quantities;

but by later experience we know that none of these remedies are necessary, and that the disease disappears as soon, and with as much certainty, where none of them are employed, merely by keeping the parts clean, with a proper attention to regimen.

In speaking of cleanliness it is proper to remark, that both in men and women it ought at all times to be inculcated, particularly in women, where the matter of Gonorrhœa is very apt to become acrid, and excoriate the parts to which it is applied.

Attention to this circumstance is often advised, on the supposition of chancres being likely to occur from the matter of Gonorrhœa, where it is allowed to rest long upon any particular spot. Whatever excites attention to cleanliness will here prove useful; but no practitioner of observation will now admit that the advantages arising from it proceed from this cause. Were this the case, excoriations produced in this manner would not heal without the use of mercury; whereas we all know, that affections of this kind, proceeding from the matter of Gonorrhœa, never require mercury, and that they heal easily merely by bathing the parts frequently, and preventing the matter from resting upon them in future.

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## S E C T. XI.

### *Recapitulation.*

I have thus finished the observations I had to offer on Gonorrhœa as it appears both in the male and female patient; but it may not be improper in this place, by a short and general recapitulation, to bring the subject into one point of view.

1. From the arguments stated in different parts of the preceding sections it appears that Gonorrhœa is a local disease, proceeding from a specific contagion, and not necessarily connected with any other.

2. That the discharge of matter which takes place is not the effect of ulceration, but proceeds from an inflamed state of the urethra and contiguous parts.

3. That this inflammation, while confined to the membrane of the urethra, particularly to the parts near to the extremity of the penis, is never productive of any alarming symptom: a discharge of matter, accompanied with ardor urinæ, and some slight degree of Chordee, being almost the only ones that take place.

4. That the disease is always formidable in proportion to the depth of parts that are affected, the symptoms which occur being more or less violent, and productive of more or less hazard, according as the inflammation has reached to Cowper's glands, the prostate gland, or to the bladder.

5. That in the cure of Gonorrhœa no advantage is derived from mercury, or any remedy acting altogether upon the constitution. The disease being entirely local no medicine proves useful but such as act directly upon the parts affected.

6. That where the membrane of the urethra is alone affected, no remedy proves so successful as astringent injections\*.

7. That these injections, in order to act with safety and advantage, must be thrown up with much caution, and repeated from six to eight or ten times a day, at the commencement of the disease; less frequently as the discharge lessens, and at last in a gradual manner, laid entirely aside.

8. But although injections of this description may be used with safety in all cases of Gonorrhœa where the membrane of the urethra only is affected, that they are never employed but with much risk of doing harm where the inflammation has reached to Cowper's glands, to the prostate gland, or to the bladder.

9. That the greatest attention is therefore required in distinguishing between the different stages of Gonorrhœa; the want of this having, with some prac-

\* Vide Numbers 18 and 19 in the Appendix.

tioners, brought the use of injections into discredit, when the fault did not lie in the remedy, but in the improper application of it.

10. That in all states of the disease, where the inflammation has gone farther than the membrane of the urethra, instead of wishing to remove the discharge, we should rather endeavour to solicit a greater flow of it; the running, in such circumstances, being only a secondary object, when compared with the consequences which are apt to ensue from inflammation proceeding to a great height. For the more certain prevention of which, blood-letting, both general and local, are particularly useful on the first approach of such symptoms as indicate an affection, either of the mucous glands of the urethra, the prostate gland, or bladder.

11. That when, notwithstanding of blood-letting, a low regimen, and other parts of an antiphlogistic course, tumours form in Cowper's glands, or in any other parts contiguous to the urethra, and when supuration occurs in them, the matter should be immediately discharged by an incision of a sufficient size, and the fore treated in the usual way.

12. That in affections of the prostate gland, which do not give way to blood-letting, opium alone is to be depended on for relieving the irritation and distress which ensue from them; the pain being often so severe that no other remedy proves in any degree useful. That opium, in these cases, proves always most effectual when applied directly to the parts affected, in the form of injection; and that extract of hyocyamus may be used when it is found that the costiveness, which usually results from opium, proves hurtful.

13. That when the bladder is affected, opium or hyocyamus are in like manner to be used to relieve pain. That uva ursi is the most effectual remedy for obviating the discharge of viscid mucus, the usual consequence of inflammation of the bladder, and that the thickening of the coats of the bladder, which inflammation, from whatever cause it arises, is apt to

induce, has in some cases been removed by a gentle course of mercury.

14. And lastly, it appears, that the leading symptoms of Gonorrhœa are so much alike in both sexes, that the general method of treatment is similar in both: only that in women, from the situation and organization of the parts affected admitting of it, injections may at all periods of the disease be used with more freedom than in men; an inflamed state of the bladder being, in womne, almost the only circumstance that can take place in Gonorrhœa to render injections improper.

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### C H A P. III.

#### *Of the Consequences of Gonorrhœa Virulenta.*

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### S E C T. I.

#### *General Remarks on the Consequences of Gonorrhœa Virulenta.*

**A**LTHOUGH the treatment pointed out in the preceding sections for the cure of Gonorrhœa will in general prove successful, yet every candid practitioner will admit that it is not always so, and that instances occur of different symptoms proving obstinate, notwithstanding a careful and attentive application of every remedy with which we are acquainted.

The causes of this failure I have already endeavoured to explain. In this part of the work I mean to speak of the consequences of Gonorrhœa, some of which are, in most instances, the effect of mismanagement, while others ensue after the greatest care

and attention in the conduct of the cure. They are all, however, of a local nature, and not necessarily connected with any general disease of the constitution. The following is the order in which I mean to treat of them:

Gleet; feminal weakness and impotency strictures in the urethra; abscesses and fistulæ in perineo; deranged sensations in the bladder and urethra; swelling of the testicle; swelling of the epididymis and spermatic chord; swellings of the lymphatic vessels of the penis; swelling of the glands in the groin; excoriations of the glans and prepuce; phymosis; paraphimosis; warts on the glans, prepuce, and labia pudendi. And, lastly, I shall add a few observations on what may be termed *Gonorrhœa Simplex*, in which a discharge occurs from the urethra, without any infectious matter being applied to it.

*Levi Moore*

## SECTION II.

### *Of Gleet.*

**WHEN** the discharge in *Gonorrhœa* continues obstinate, after the symptoms of inflammation are removed, the disease is then termed a gleet.

From this definition we might be led to imagine that the import of the term *Gleet* would be clearly and generally understood, and that no risk could occur of its being misapplied. This, however, is not the case; for the symptoms which one practitioner considers as *Gleet*, are by others said to be *Gonorrhœa*. Some assert that *Gleet* does not take place till the discharge becomes colourless, and resembles mucus; while others are of opinion that *Gonorrhœa* changes into *Gleet* before this change of colour is perceptible.

All agree in this, that *Gleet* does not take place so long as the discharge is capable of communicating infection; but no precise marks have yet been discovered by which we can judge of this circumstance

with certainty. When the discharge becomes transparent and viscid, like mucus, I believe that no infection will ever ensue from it; but I also suppose that it is often equally harmless long before this change has appeared in it. By the use of astringent injections demulcents, and cooling purgatives; and, in some cases, by the lapse of time alone, the running in Gonorrhœa will lose its colour, acquire a mucous appearance, and even abate in quantity, and yet it will again become yellow, and appear in larger quantities than at first. In such circumstances the discharge may be considered as altogether deprived of the power of communicating infection; at least no instance of the contrary has ever occurred to me, and I have reason to think, that, in every instance it will be found to prove inoffensive where the inflammation by which it was at first induced has been once completely removed, ~~whatever~~ the method of cure may have been by which this was accomplished: while, on the contrary, I am convinced, from a variety of facts which might here be enumerated, that so long as the primary inflammation of Gonorrhœa continues, however long this may be, the matter produced by it is equally capable as at first of communicating infection. Admitting, therefore, that the running should not be denominated Gleet, so long as it is in any degree infectious, it is evident that this term ought not to be applied to it, till it has become clear and transparent, or till the inflammation by which it was at first induced is removed, and of which we can only be certain by the ceasing of the pain which accompanied the inflammatory state of the disease. The discharge in Gonorrhœa frequently disappears altogether, and the patient considers himself, for the space of several days, nay, in some instances, for weeks, as completely cured; when, either by violent exertion on horseback or on foot, by excess in drinking, or too early connection with women, the running will again take place, with every mark of a new infection. When the patient, however, is conscious of not having ex-

posed himself to the risk of being infectedd, he may always consider this renovatd discharge as of a harmless nature, provided the inflammation and pain by which it was at first excited had previously disappeared. Among other proofs of this, I might mention various instances of married men, who, from Gonorrhœa contractd in youth, have frequently, during life, from one, or other of the causes I have mentioned, experienced frequent returns of this discharge, who, in this situation, have had frequent connexion with their wives, without communicating the disease. In some of these the discharge will be absent for several weeks, nay, for months together; while in others it has not disappeared for more than two or three days at once, during the space of twenty years.

In all of them, upon its first recurrence, it has exactly the appearance of a new infection; but the event soon shews it to be materially different. If astringent injections are employed, they, for the most part, put an immediate stop to the running; and, when left to itself, the matter becomes more quickly colourless than it ever does in a recent case of Gonorrhœa.

In one instance, a gentleman applied to me in a state of the greatest distress, the day after his marriage. He came upwards of twenty miles from the country, with every appearance of a recent clap; which, he assured me, had broke out that very morning, although no appearance of an infection, under which he formerly laboured, had been perceived for upwards of three months, nor had he, during that period, been exposed to the risk of getting a new one. This, in the state of temporary frenzy, under which I found him, led to the distressful idea of his having been infected during the preceding night, by his newly married wife. I assured him that this was impossible; for that, independent of the surety which he derived from the unblemished character of his wife, no infection could have appeared with such violence in such a short space

of time; and on hearing that he formerly laboured under Gleet, I also ventured to say, that the discharge would probably disappear almost as suddenly as its approach had been rapid. My prediction proved true. I immediately threw up a vitriolic injection, and caused him to repeat it three or four times in the course of a few hours. By five or six o'clock in the afternoon nothing but a slight oozing from the urethra was perceptible; I furnished him with more of the injection, and he went home perfectly satisfied in the evening.

This happened several years ago, and the same appearances have uniformly recurred since that period; upon every connection with his wife, but no infection has ever been communicated to her. For a considerable time he always had recourse to the injection on the running taking place, but at last, being perfectly convinced of its being perfectly harmless, he allowed it to go on; so that for these last three or four years, he has seldom been many days together free of it.

But although patients, from being long accustomed to this discharge, come to find that it does not communicate infection, still they can never look upon it with indifference; they all find it troublesome and distressful, and are therefore, at times, anxious to get free of it. When, at the same time we consider, that a long continued Gleet is apt to lay the foundation of some very obstinate and perplexing affections of the urethra, it will at once appear, that in every instance, this symptom merits our serious attention.

Gleet seems evidently to arise from different causes, requiring different modes of treatment: it will therefore be proper to consider them separately.

1. The most frequent variety of Gleet succeeds to the first stage of Gonorrhœa, in which we do not suppose that the original inflammation proceeded farther than the urethra itself, or the small mucous glands immediately emptying into it.

When the cure of this variety of Gonorrhœa is interrupted, either by improper treatment, or by neg-

ligence on the part of the patient, and when the discharge is thereby allowed to go on for any unusual length of time, Gleet is thus frequently produced. Astringent injections will, for the most part indeed, put a stop to the running, but the slightest excess very commonly excites a return of it.

This variety of the disease we conclude to proceed from relaxation and debility in the parts first affected, and that the obstinacy with which it often continues depends upon a farther degree of weakness, induced in these parts by the longer continuance of the running; by which it would appear to have a power, if not counteracted, of continuing or propagating itself.

By some, this idea of Gleet proceeding in any instance from weakness, is ridiculed; and as the suggestion comes from very respectable authority I think it right to take notice of it\*.

Mr. Hunter observes, that by mechanical weakness is understood the not being able to perform some action, or sustain some force; by animal weakness the same; but he cannot understand the expression when applied to an animal performing an uncommon, or an additional action, as seems from the quantity of matter discharged, to happen in Gleet.

This opinion appears to be founded upon the idea of an increased discharge being always the consequence of an increased action in vessels of the part from whence it proceeds; and it originates from his not discriminating between general debility and local relaxation, or loss of tone in a particular part.

Although an increased discharge in the vessels of any part would seem to imply an increased action in these vessels, yet the reverse of this will, I believe, in most instances, be found to happen; and that affections of this nature proceed chiefly, if not entirely, from local debility. Loss of tone in the exhalents will necessarily produce a more copious discharge of their contents than will probably happen while

\* Vide *Treatise on the Venereal Disease* by John Hunter, p. 100.

their power of retention remains entire. Where these vessels unconnected with the rest of the system this would not take place; but connected as they are with the arterial system, while the vis a tergo remains the same, any partial debility to which they may be liable, must, perhaps universally, be attended with a preternatural effusion of their contents.

There is much reason to suppose, from the phenomena which occur in inflammation, that an increased action takes place in the vessels of the part affected: but during the existence of this increase of tone, we commonly find that in Gonorrhœa, the discharge is not so considerable as it afterwards becomes when the symptoms of inflammation abate. Nay, it is universally known that the running is apt to stop entirely when the parts affected inflame to a greater degree than usual, and that nothing so readily solicits a return of it as the removal of this inflammation, by the use of emollient injections.

This is an argument of some importance in favour of our opinion, and it is farther confirmed by the nature of all the remedies which we employ in Gleet, which are either of an astringent, strengthening kind, or consist of stimulating injections, and other applications of a similar nature, which seem to act by exciting an increased exertion in the vessels of the affected parts, by which they are enabled to resist the action of the arterial system from behind.

I therefore consider it as clear and decided that this variety of Gleet proceeds from relaxation and debility of the exhalents of the urethra, and, perhaps, of the excretory ducts of the smaller mucous glands of that passage.

This opinion of Gleet being connected with debility, may indeed be carried too far, as happens, I believe, daily in common practice. Where Gleet has run on for any length of time, many think that it has either at first proceeded in a great measure from general weakness of the constitution, or that it has tended to excite such a general degree of debility as will

effectually obstruct every attempt towards a cure, till this state of the system be removed.

Hence the patients are with much care and anxiety enjoined the use of bark, steel, and other tonics, with a view to remove the general debility; while less attention is usually given to the real cause of the disease, the local relaxation of the parts originally affected.

That general weakness often takes place in Gleet, and that it may even be induced by a long continuance of the discharge, will not be denied; but I have much reason to think, that in practice, this idea is often carried farther than it ought to be. This must necessarily be the case whenever it makes us lose sight, as I have observed above, of the real origin of the disease; but there is also cause to imagine, that in giving additional vigour to the system at large, we tend to increase the discharge by the urethra, unless the tone of the parts which have been more particularly weakened be at the same time restored. The reason of this has been explained above, and I have often had evident proofs of the hurtful tendency of the practice; by which, while the patient, from the effects of sea-bathing, a full diet, and the use of tonics, was daily getting more full in flesh than he was before, the disease has evidently been gaining ground, from no particular attention being given to the state of the parts from whence the running proceeds.

In a state of universal debility, whether induced by a long continuance of the discharge, or any other cause, the greatest attention ought certainly to be given to it; but what I wish to inculcate is, that in common practice we rather do harm by considering this general relaxation of the system as the first object of attention, when, in fact, it often either does not take place at all, or only in such a degree as to render it a matter of very trifling importance, when compared with the disease in the urethra.

In a great proportion of cases of this variety of Gleet, our attention should be almost entirely direct-

ed to this affection of the urethra ; and by experience we find that such remedies are chiefly to be depended on as act directly upon the seat of the disease.

A variety of medicines have been employed for this purpose, but they may all be comprehended under the two general heads of astringents and stimulants ; for all that have yet been found useful in Gleet seem either to act by their astringent properties or by their power of stimulating the parts to which they are applied.

When astringent injections have not been already employed, they ought, in the first place, to get a full trial ; for although they do not always prove successful, yet they frequently do so, and we seldom or never find that any risk ensues from them, as sometimes do from stimulating injections.

Any of the astringent solutions for which prescriptions are given in the Appendix, may be employed, but the vitriolic solution, No. 18, is one of the safest, and very commonly proves the most effectual. In the use of all injections of the astringent kind it is necessary to throw them frequently up, not less than six or eight times a day. This was particularly inculcated in the use of injections in Gonorrhœa, and it proves equally proper in this variety of Gleet.

But where astringent injections have already been employed for the cure of the preceding Gonorrhœa, and where there is no doubt of a complete trial having been given them, in such circumstances, as there would be no cause to expect advantage from a farther use of them, they ought to be laid aside.

In that state of the disease where a plentiful discharge takes place, with little or no pain, and where astringents have been employed with no advantage, stimulating applications become particularly proper.

The stimulants we employ are of two kinds ; acrid solutions and mixtures in the form of injections and bougies. Which ever of them are used must be of such a nature as to stimulate the parts gently to which they are applied, but not so strong as to excite inflam-

mation in any considerable degree. They prove most successful where they give only a moderate degree of pain and heat in the urethra; such as is felt in the commencement of the first stage of Gonorrhœa. Instances, indeed, often occur of a newly contracted clap carrying off a Gleet that has been of long duration; and as this is always productive of some degree of inflammation, we conclude that the remedies employed in Gleet must act in a similar manner, viz. by gently stimulating and exciting the parts to inflame in such a degree as experience shews to prove useful. To excite violent pain would at all times be improper, as the inflammation which this would produce might go farther than we would incline it to do. Much harm, indeed, has been done by want of attention to this circumstance. A swelled testicle is not an uncommon effect of it; and I have known the inflammation carried to the prostate gland and bladder.

This, however, may always be prevented; nor can it ever occur but from great inattention. Wherever injections are used, they should at first be so weak as to excite only a very slight degree of uneasiness.

In the formulæ annexed to this they are of such a strength as to act in this manner in a great proportion of people, although, in some instances, I have found them rather weaker than necessary. An addition of strength, however, is so easily given, that at first they ought never to be stronger.

One of the best injections for ordinary use is a weak solution of corrosive sublimate in water\*. That is, in the proportion of an eighth part of a grain of the mercury to an ounce of water, which is as strong as it ought ever to be used at first; although I have met with some, who, in a gradual manner, have been brought to bear half a grain to an ounce. I know that some have advised it of a still greater strength, even to the extent of a grain of mercury to the ounce of water; but although I am in the daily practice of using this remedy, I never found any person who could bear

\* Vide Appendix, No. 24.

it of this strength. I therefore suspect that those who advised it have never known it used.

I have taken the more particular notice of this, from several instances having fallen within my own observation, of very pernicious consequences ensuing from the use of injections containing too great a proportion of mercury, while no inconveniency arises from them when not stronger than those I have pointed out.

In some cases, where a solution of corrosive sublimate by itself has failed, I have known the addition of *saccharum saturni* prove useful\*; and in some very irritable patients, in whom even the smallest quantity of the mercury excited too much pain, an addition of mucilage has enabled them to bear it. Of this a formula is given in the Appendix†.

A solution of crude sal ammoniac proves‡ sometimes effectual in this state of Gleet. The volatile alkali, such as *spiritus corn. cervi*, and *spiritus salis ammoniaci*, properly diluted, make likewise useful injections for this purpose, as in formulæ No. 28 and 29: and verdigrise, dissolved either in oil, or in spirit of sal ammoniac, afford also a very effectual form of injection for the same purpose: formulæ of these last are given in Nos. 30 and 31.; and in some instances tincture of cantharides, properly diluted, as in No. 32, has been found to answer.

Besides the circumstance of ascertaining the proper strength of these injections, a good deal of address is required in the application of them. They must not be employed either so long or so frequently as is required for astringent injections; with these no harm can occur, however frequently they may be applied; but injections of a stimulating nature should not be continued longer than is just necessary for exciting some degree of pain and inflammation in the affected parts.

This being accomplished, a few days should elapse before any other remedy is employed; for it some-

\* Vide Appendix, No. 25.

† Appendix, No. 26.

‡ No. 27.

times happens that the running will stop after these stimulating injections are laid aside, although, during the use of them, it appeared to be increased. But when, after an interval of three or four days, this does not appear likely to happen, injections of an astringent kind should be immediately employed, as we have already advised in the first stage of Gonorrhœa.

Even these will not always succeed; for it sometimes happens that the running, although it may disappear for a few days, will yet return again and again, with equal violence as at first.

In such circumstances, the stimulating injections must be again renewed, and the inflammation ought now to be excited in a degree somewhat greater than before; for I have commonly found that this may be done with more safety in the subsequent applications of this remedy; and in the more advanced stages of Gleet the higher the degree of inflammation that can with safety be excited, the greater certainty there is of its proving effectual.

When injections do not accomplish a cure, we endeavour to effect our purpose by the use of bougies. By irritating the urethra, bougies answer the same purpose with stimulating injections; and, in some instances, they have appeared to prove more effectual, perhaps from the support which they afford to the parts which have been deprived of their tone. This, however, does not happen with any kind of certainty, inasmuch that I always give the preference to injections in the first instance, as being less formidable in the application to all such patients as have not been accustomed to the use of bougies.

Bougies composed of the most simple materials, commonly answer all that we expect from this kind of remedy; but when these fail in exciting a sufficient degree of inflammation, they are easily rendered more active by dipping them in oil of turpentine, in a thin liniment of wax and oil with a small proportion of red precipitate, or in common basilicon reduced with oil of turpentine, to the consistence of a liniment.

I have no reason to think that mercurials act in the cure of Gleet in any respect as specifics; but the stimulus which mercurial ointment gives to the urethra, when applied upon bougies, proves often as effectual as that from any medicine which we employ. It is proper, however, to observe, that the ointment for this purpose ought to be strongly impregnated with mercury: there should not be less than equal parts of quicksilver and hog's-lard; and I have sometimes thought that mercury, extinguished by triturating with honey, acts more certainly as a stimulant than it usually does in the form of an ointment.

If the constitution has been much debilitated, we ought, while the application of remedies to the diseased parts is going on, to advise a nourishing, invigorating diet. The patient should be allowed animal food, and a moderate portion of red wine daily; and in such circumstances bark may with propriety be exhibited as a tonic: but for the reasons I have given above, I have much cause to think that the general practice of giving bark, steel, and other tonics, in every case of this kind, is by no means well founded, and in many instances that it does harm.

Some of the stimulating astringent balsams, given internally, frequently prove useful here; probably from their tendency to stimulate in a more particular manner the organs of urine than any other part of the body. Balsamum capaiba is chiefly used for this purpose, but Canada balsam, and all the turpentine, may be employed with perhaps equal advantage. Fifteen or twenty drops of any of these may be given three or four times a day.

A cautious use of cantharides has also proved serviceable in this variety of Gleet. Ten drops of the tincture may be given two or three times a day.

But although some advantage may be derived from all of these remedies, when employed along with local stimulants, as we have advised above, yet no dependance is to be placed upon them when they are not conjoined with these. This, it may be said, ren-

ders the advantages to be expected from them doubtful and equivocal; but in different cases I think I have perceived greater advantages from a combination of these two sets of remedies, than usually occurs from a separate use of either of them.

Cold bathing is a remedy commonly advised in Gleets, and where the constitution is so much debilitated as to require attention, it will very generally answer a good purpose; otherwise no advantage can probably accrue from it, if it be not from the local application of cold to the parts chiefly affected. In this view, the daily effusion of cold water upon the penis, and the bathing of the perineum, proves sometimes useful.

2. The next most frequent variety of Gleet succeeds to the second stage of Gonorrhœa. After all the symptoms excited by the actual presence of inflammation have subsided, this variety of the disease is very apt to terminate in Gleet.

In the third section of the last chapter I endeavoured to shew, that in this stage of Gonorrhœa, Cowper's glands are chiefly affected, and that they afford a great proportion of all the matter that is discharged. Any inflammation which occurs along with this in the membrane of the urethra, is, for the most part, easily removed, so that the Gleet, which often succeeds, proceeds either altogether, or nearly so, from the cavities of these glands.

Gleet, proceeding from this cause, is, for the most part, easily distinguished from that which we have described as the first or most frequent variety of the disease. In this last the matter usually proceeds from within an inch, or little more, of the glans, or when parts farther back are affected, the discharge is forced off from them by very gentle pressure upon the perineum: but, in the other, the matter is, in every instance, found to proceed from the upper part of the urethra; a greater degree of pressure upon the perineum is necessary to force it out; and some degree of fulness, accompanied with irritation, and

even pain, is experienced on the perineum being pressed upon for this purpose.

We are also assisted in the diagnosis by the history of the preceding Gonorrhœa; for it will be uniformly found that the first variety of Gleet has succeeded to the first stage of Gonorrhœa, and that the second stage of Gonorrhœa has given rise to that which we are now considering.

In the treatment of Gleet it is of importance to have this difference ascertained, for the remedies which commonly accomplish a cure in the one, are used in the other either without any advantage whatever, or even with evident proofs of doing harm. Thus, although in the first variety of Gleet, we depend so much upon stimulating injections, that a cure in most instances cannot be accomplished without them; in the other, where the larger glands of the urethra are affected, they very commonly render every symptom worse than it was before. They at least do so where the injection is of such a strength as to excite pain and inflammation; and if weaker than this, it may be used for an indefinite length of time, without any effect resulting from it. The glands opening into the urethra being here the seat of the disease, astringent injections, applied as we have elsewhere observed, to their excretory ducts, may produce a temporary stoppage of the discharge; but, as they do not reach the cavities of the glands, no permanent advantage can be expected from them. While, again, when an injection is used of such a strength as to excite inflammation upon the ends of these ducts, it is very apt to produce swellings in the glands themselves, which at last commonly terminate in suppuration, to the great distress and disappointment both of the patient and practitioner.

Whenever it is therefore discovered with certainty, that this variety of Gleet exists, injections should be no longer employed; or when, for the satisfaction of the patient, a farther trial of this remedy becomes

necessary, such preparations only should be used as are moderately astringent.

In such circumstances bougies, and blisters to the perineum, are the most effectual remedies I have ever employed. The bougies should be of the mildest kind, such as stimulate the parts gently, without exciting inflammation. By this, and by the support which their size and form afford to the weakened parts, they often prove highly serviceable; and even when they do prove more powerfully stimulating than we may have wished or expected, they do not so readily do harm as injections; for the inflammation with which this may be attended is always accompanied with an instantaneous discharge of matter, by which the inconvenience that otherwise might result from them is very effectually prevented.

Bougies ought, for every purpose, to be as large as the capacity of the urethra will admit; but their being of a full size is more particularly necessary in this variety of Gleet than for any other malady; for it is chiefly by their size that they prove useful here.

In most instances of this kind it appears, in the course of a few days, whether bougies are to be of service or not; but no permanent advantage is ever to be expected from them if they are not continued for a considerable time. When the disease has been of long duration, the bougies ought to be applied for the space of ten or twelve weeks, and not even desisted from then if the cure be not completed. It is proper, however, to observe, that after bougies have been used for such a length of time as ought to accomplish a cure, they should from time to time be laid aside, that the effects produced by them may be discovered; for while they are daily introduced we can never know with certainty whether any discharge which takes place is the effect of the disease, or of the irritation which they excite; as bougies can never be applied for any length of time together, not even to a sound urethra, without being found covered with matter, or with mucus in the form of matter, on their being withdrawn.

When bougies fail, a blister applied over the whole perineum sometimes proves serviceable. Whether it is by the stimulus which they give to the parts affected, or by the discharge which they excite, is uncertain; for in some an evident advantage ensues upon the first or second day from their application, and before any quantity of discharge can have occurred, while in others no effect is observed to result from them till the second, third, or perhaps, fourth blister has been applied. In a few instances, some advantage has appeared to be derived from a small portion of the blistered part being kept open with epispastic ointment, which, in two cases of much obstinacy, led me to advise the introduction of a small seton on one side of the perineum; but although this seemed likewise to lessen the discharge, the advantage derived from it was neither so great nor so obvious as to compensate the very disagreeable nature of the remedy.

In very obstinate cases of this variety of Gleet, the patient will frequently be found to be of a scrophulous constitution. If the disease has not already appeared in a more evident manner in other parts of the body, it will at least often happen that the glands of the neck, and other suspicious parts, will appear to be tumefied, and that the complexion of the patient, which is commonly delicate, gives much cause to conclude that the system is not free of it.

In such circumstances, all the remedies usually employed in scrophula will from time to time, be advised. Bark and hemlock have sometimes proved useful here; but no remedy that has yet been employed in scrophula is in any degree equal to sea-bathing.

In enumerating the different varieties of Gleet, I have proceeded in the order in which they most frequently appear. The next of which I shall take notice proceeds from strictures in the urethra.

In an ensuing section I shall find it necessary to enter more minutely upon the consideration of venereal strictures in the urethra: at present, therefore, it

seems only requisite to say, that they are to be considered as a very frequent cause of Gleet. The spongy surface of the substance from which these strictures are produced is very apt to become tender and excoriated. A slight degree of ulceration thus takes place which continues to give out matter while any degree of the stricture remains, and where the extent of the disease is considerable, this of itself would afford a very copious discharge; but besides this, the remora which every stricture produces, of urine and mucus between the part on which it is seated and the bladder, acts as a very powerful cause of irritation, and in this manner renders the discharge more abundant than we almost ever find it to be in Gleet, proceeding from any other cause.

Where strictures are not suspected as the cause of the discharge, as often happens where the obstruction to the flow of urine is not remarkably great, the patient as well as the surgeon is apt to be deceived, and to proceed daily with the plan of effecting a cure by injections, balsam of copaiba, and other astringents. None of these remedies, however, have any influence, and the discharge, after many years continuance, is found to be nearly in the same state, either as bad, or perhaps worse, than at first. Of this every practitioner must have met with instances, and they always prove the source of much perplexity and embarrassment.

In every case, therefore, where Gleet resists the usual remedies, and is thus particularly obstinate, it ought to be our first object to ascertain the real state of the urethra, and to learn whether strictures are present in it or not. In some cases this will at once be known from the state of the symptoms obtained from the patient, as well as from external examination of the urethra from the point, of the penis to the fundament. This, however, will only happen in the more severe degrees of the disease. Where the obstruction is slight, it may, as we have already observed, pass unnoticed; so that in all such circum-

stances, and where there is any cause for doubt, the passage should be examined with a bougie, by which alone any certainty upon this point can be obtained.

When the existence of stricture is discovered, all other remedies ought at once to be laid aside, and the cure trusted entirely to bougies. Hereafter we shall have occasion to speak more particularly of bougies; at present we need only say, that they are the only remedy upon which we can depend for the removal of strictures, and that they very commonly prove effectual when duly persisted in.

When the discharge proceeds entirely from strictures, it will, for the most part, soon subside on these being removed; but when it continues more than a few days after the bougies are withdrawn, it will be proper to employ astringent injections in order to carry it off. Lime-water answers well; for this particular purpose, indeed, it answers better than any other form of injection I have tried, but it requires to be diluted with an equal quantity of common water.

4. The last variety of Gleet of which we have to take notice proceeds from a swelled state of the prostate gland, and succeeds, as we have already had occasion to see, to the third stage of *Gonorrhœa Virulenta*.

In treating of *Gonorrhœa* the symptoms were enumerated by which affections of the prostate gland may be discovered; but we have no certain means of knowing to what extent it may be swelled but by examination with the finger in ano.

Besides the inconveniency which occurs here from the discharge itself, and which is common to this with every variety of Gleet, there is always a good deal of uneasiness, and even pain, produced by the swelling of this gland, which excites a more frequent desire to pass water than any other variety of the disease, together with a sensation of heat and fulness over the whole parts contiguous to the anus. The tenesmus which often takes place is also a very troublesome symptom.

Gleet, proceeding from this cause, is sometimes combined with other varieties of the disease, particularly with that which was last described. In this case the discharge has most frequently the appearance of being a mixture of pus and mucus; but when the running proceeds entirely from an affection of the prostate gland, it is thinner than purulent matter, and, although sometimes tinged of a white or yellow colour, it is more frequently of the consistence and colour of mucus. This makes it often be mistaken for a discharge of semen.

No injections are of any utility in this variety of Gleet; nor is any advantage derived from bougies. On the contrary, they are both apt to do harm, particularly a perseverance in the use of them; a practice which those not accustomed to this branch of business are very apt to fall into. Swellings of this gland are very commonly attended with some degree of obstruction to the passage of urine. and when this is mistaken for strictures, as often happens, bougies are immediately advised in order to remove it.

Bougies, however, never prove useful here: on the contrary, they very commonly irritate the gland to such a degree, as to excite both an increase of the pain and of the discharge.

Opiates are the remedies upon which we place most dependence. By allaying irritation, they not only keep the patient free from pain, but in doing so they tend more than any other remedy to lessen the discharge. It must, however, be acknowledged, that they act chiefly as palliatives; but the mere prevention of pain is a point of no small importance in a disease which otherwise is apt to render the patient miserable. In speaking of affections of this gland in the third stage of Gonorrhœa, I advised opiates to be used in clysters, instead of being taken by the mouth. They do not, in this form, so readily induce sickness, and they usually prove more effectual in relieving pain.

In several instances, where no great advantage

was derived from all the quantity of laudanum that durst be given by the mouth, patients have been kept easy by a grain or two of opium dissolved in a small quantity of mucilage, and thrown, from time to time, into the rectum.

Where this disease occurs in scrophulous constitutions, an occurrence by no means uncommon, hyocyamus, cicuta, and sea-bathing, are the remedies usually employed; and although they do not often accomplish a cure where the gland is much swelled, yet they frequently afford relief; and slighter degrees of the disease have, in some instances, been removed by them entirely.

Some practitioners, as I have already had occasion to remark, give mercury in every variety of Gleet, but I have never known any advantage derived from it, and where the prostate gland is affected it very commonly does harm.

As I have mentioned above, that in Gleet proceeding from strictures in the urethra, some slight degree of ulceration takes place, it may be imagined that mercury ought in such instances to prove useful, from its well known powers of healing venereal ulcers. It is not, however, found to promote the cure of these ulcerations; a circumstance that may be considered as a farther proof of the difference between *Gonorrhœa Virulenta* and *Lues Venerea*; for if affections of this kind were induced by the matter of *Lues Venerea*, mercury would seldom fail in curing them, while no other remedy would ever prove successful. But, instead of this, I have repeatedly found, that no advantage is derived from mercury in the treatment of this symptom, while bougies, when properly managed, very commonly prove effectual.

What we have hitherto said upon the subject of Gleets relates chiefly to the disease as it occurs in men, it being in them both more frequent, and of much more difficult treatment than it usually is in women.

We often meet with it, however, in women; but it is proper to remark, that it is equally difficult to distinguish it from fluor albus, as in a former section we have observed Gonorrhœa to be. Referring to what was then said upon the means of distinguishing between the two diseases, we shall at present proceed shortly to observe, that in women we depend entirely for the cure of Gleet upon a proper perseverance in the use of injections. When after a due continuance of such as we reckon astringent \*, if the discharge still continues, those of a stimulating nature should be employed, particularly Nos. 24 and 25.

When the disease is seated in the vagina, as is generally the case, these injections may be thrown up with freedom; but when the discharge proceeds from the urethra they ought, on account of the contiguity of the bladder, as we had occasion to remark in a former section, to be thrown up with much caution.

In women I have sometimes found that a Gleet has proceeded from ulceration within the verge of the vagina. In such instances injections have little or no influence; and as sores of this kind are commonly connected with Lues Venerea, they can only be cured by a course of mercury.

It is proper, however, to remark, that women are liable, as men are, to excoriations from the acrimonious nature of the matter of Gonorrhœa. A discharge of matter from this cause will be most readily cured by astringent injections, or bathing the parts with lime-water, or a saturnine solution.

I have never known the real venereal stricture occur in women. Excressences form in the urethra from other causes; but stricture from Gonorrhœa must necessarily, in this sex, be a rare occurrence. If it is ever met with, bougies must here, as in men, be depended upon for a cure.

\* Vide Appendix, Nos. 18, 19, and 20.

## S E C T. III.

*Of Impotency from Seminal Weakness.*

WE here mean by impotency a deprivation of the power of propagating the species.

This may proceed from various causes; but it is that variety of it only which is usually supposed to arise from weakness in the seminal vessels that we are now to consider.

It is an occurrence which, in young people, either in idea or reality, takes place daily; and as it proves at all times a source of much anxiety and distress, it necessarily becomes a frequent object of attention to practitioners. A degree of debility inducing want of retention in the seminal vessels is, no doubt, occasionally met with; but the strong desire which Nature has wisely implanted in all men to be complete and entire, in whatever relates to the propagation of his species, is often, in early youth, the cause of much ill-founded suspicion on this point, and of circumstances respecting it being considered as real which never took place.

Thus there is nothing more common than young people supposing they are weak and debilitated, on perceiving an oozing of mucus from the urethra, or a discharge of semen when at stool. The first, however, is natural to many when in full health, and where no suspicion of weakness exists; and the latter, or a discharge of semen, must at all times be the consequence of hardened feces compressing the vesiculæ seminales, when these vessels are full of semen. But suspicion on this point being once awake, it is often difficult, and sometimes impossible, to remove it; inasmuch that many have been rendered miserable by this alone, where no vestige of disease existed.

It is considered as one of the most certain proofs of weakness in the seminal vessels when a discharge of

femen instantly succeeds to an erection, or, perhaps, to an imperfect degree of it. But this may also happen from a state of over-excitement in the other parts of generation, and I also believe that it often occurs from the seminal fluid being collected in too great quantity in the *vesiculæ feminales*. I have reason indeed to imagine, as will appear in the sequel, that this is the most frequent cause of all such affections.

It may be said, if the disease exists, and the patient is rendered completely impotent, that the cause of his being so is a point of little importance. It will appear, however, that this is by no means the case; for while real impotency is in a great proportion of cases to be considered as incurable, we have it in our power, perhaps, in most instances of approach to this state, to accomplish a cure.

In the last section we have seen that Gleet proceeds at one time from an affection of the glands in other parts of the urethra, but in some cases that it arises from a swelling of the prostate gland. When this exists for any length of time, we find that not only the duct of the prostate gland becomes weak and relaxed, but that a loss of tone takes place in some of the contiguous parts, particularly in the excretory ducts of the *vesiculæ feminales*; insomuch that a great proportion of all who have long laboured under Gleet from affections of this gland, have likewise been liable, in some degree, to seminal weakness. It is well known that long continued Gleet, are often the cause of Impotency. For the most part, it is supposed, that this happens from the general debility which they induce. In some instances this may be the case; but I have much reason to think that they act much more frequently by inducing a local weakness only in the parts destined for the reception of the semen. This I conclude to be the case from this kind of debility taking place where there is no appearance whatever of general weakness, for instances often occur in constitutions apparently firm and healthy, of such degrees of weakness in the seminal organs, that emissions take

place, not merely from partial erections and lascivious ideas, but from the ordinary friction applied to the penis in riding and walking, and, in some instances, from the effect of heat alone, whether excited by wine, exercise, or sitting near a fire.

In people who have suffered much from frequent returns of Gonorrhœa, particularly where Gleet has taken place from the cause I have mentioned, I have known several instances of the semen running off by the slightest application of any of the causes just enumerated.

The local weakness thus induced in these parts by Gleet seems very much to resemble the effects of Onanism; a habit so baneful to many of our youth, that I believe it to be more destructive in its consequences than a great proportion of all the diseases to which in early life they are liable. Were it to prove hurtful to those only whose self-indulgence gives rise to it, there would be less cause to regret the effects of it; but, besides rendering the parent himself miserable, it evidently entails the highest distress upon posterity, by generating languor, debility and disease, instead of that strength of constitution, without which there can be no enjoyment.

Some, I know, have entertained a different opinion upon this point, and imagine that no bad effects are to be dreaded from the habit of which we are now speaking \*. But this is so directly contrary to the experience of others, and I have had so many instances in the course of my own practice of constitutions being irretrievably ruined by indulgence in it, that I cannot avoid, in the strongest manner, giving my opinion of it: nor does it appear that any benefit could result to society from a contrary opinion being admitted, even allowing it to be well founded; for although no immediate harm might ensue from it to the constitution, it ought to be discouraged as unnatural, and from its tending to divert the attention

\* Vide Treatise on the Venereal Disease, by John Hunter chap. xii.

from an enjoyment of a much superior kind. While, therefore, there is much cause to consider the practice as highly dangerous to all who follow it, and while such a propensity prevails towards it in that early age when boys cannot form a judgment of its deleterious tendency, I consider it as incumbent on those who write upon it to paint it and the baneful effects which result from it in their true and proper colours.

In the treatment of this variety of Impotency, whether it has been induced by Onanism, or whether it be the consequence of Gleet, it is proper to distinguish it into two stages. The one, so far as I have seen, being of a nature that does not admit of any certain remedy, while the other may, in most instances, be completely cured. Many consider it so certainly as incurable that the patient is led to despair from the first approach of it, and the opinion is often unfortunately realized merely from the cause I have mentioned, our not distinguishing the two stages of the disease, and allowing that which I suppose may be easily removed, to proceed without any attempt for this purpose, to that state of it, which, in most instances, may be considered as incurable.

Practitioners are frequently applied to by young men labouring under what I shall term the first stage of Gleet; who, finding that a seminal discharge takes place from the slightest causes, perhaps merely from their being in company with women; from lascivious dreams; or from the parts of generation being in any degree overheated, begin to be afraid that they shall never again have the power of retention, and conclude therefore that they cannot with propriety enter into a matrimonial connection. We often find that they admit Onanism to have been the primary cause of their distress, although, for a great length of time, perhaps for a number of years, they assert, and with no reason on our part to doubt them, that they have been entirely out of the practice of it.

In this situation, whatever may be the appearance

and habit of body of the patient, strengthening astringent remedies are prescribed, such as bark, steel, balsam of copaiba, cold bathing, &c.; and whatever are his views, he is advised to avoid matrimony and all venereal intercourses.

In a great proportion of cases, however, I am convinced that this practice and this advice are erroneous. Following the bulk of practitioners, I easily adopted them; but no good resulting from them I have long since relinquished them, and I have seldom failed of success by advising measures of an opposite nature.

In a great proportion of all that are injured by this destructive habit, a morbid irritability of the organs of generation seems to be excited. By this a greater quantity of the seminal fluid is secreted than the vesiculæ feminales can retain: in consequence of which, it either bursts out during nocturnal dreams, or is easily excited to flow by the application of any of the causes above-mentioned.

Even after the habit has been long left off I have known the effects of it continue in a very distressful degree, and I conclude that they proceed chiefly from too plentiful a secretion of semen, from the nature of the remedy which in most instances has proved successful.

Instead of advising abstinence from women, I always inculcate as frequent connection as natural desires seem to require; and when matrimony is in view, instead of being afraid of it, as often happens with this class of patients, from a fear of their not performing the functions of it properly, I uniformly hold it forth as the most certain remedy.

The idea of inability is so strongly prevalent with many, that they are with difficulty prevailed upon to make the attempt; but the effects of it are so certain, that with patients in such circumstances as we are now considering, it may always be advised with the greatest confidence of success. Nor is the assistance of other remedies required in this plan of cure;

at least in various instances, patients, who, for many years together had been almost constantly taking such remedies as they judged to be of an invigorating nature, without any advantage resulting from them, and who therefore were induced to consider their complaints as incurable, have, on laying all of these aside, become completely and entirely well in the space of a few weeks after marriage. The irritability of the organs was thus diminished; the morbid increase of the secretion was removed; and the seminal receptacles, not being over distended, were soon found to be endowed with a sufficient degree of retention.

This being a very frequent variety of the disease, I can speak of it, and of the remedies employed in it, with some degree of certainty; and I can with confidence say, that none of those commonly advised have ever, in the course of my observation, had any obvious influence; while the plan I have pointed out, very generally surpasses in its effects all that the patient could hope from it.

When a swelled state of the prostate gland is connected, as I have sometimes found, with this variety of the disease, it necessarily renders the event more doubtful, and the effect, even of this and every other remedy, more uncertain. But even here the course I have advised will sometimes prove successful. It will not remove any affection of the gland, but where the disease of that organ is not in a great degree, it proves equally effectual in removing the other, as if the gland was entirely sound; and this obviates one of the greatest sources of misery to the patient.

It may be said, that while this or any other variety of Gleet exists, the remedy I have pointed out cannot with any propriety be advised, from the risk of communicating infection. We know, however, that real Gleet does not communicate infection to others; and the means of distinguishing it from Gonorrhœa are by no means equivocal. Many in-

stances have fallen within my own observation, and others must often meet with it, of this being clearly the case. I know, at this time, several instances of men who have been married for many years, who, during the whole period, have laboured under different varieties of Gleet, and who have never communicated the disease either to their wives or children. Gleet in men seems to be equally incapable with fluor albus in women to communicate infection.

In that stage of the disease which we have just been considering, a cure, we observe, may, perhaps, in every instance, be accomplished. But when it has been of such duration as to form what may more properly be termed seminal weakness, and what I shall term the second stage of the disease, a very different prospect presents itself. The patient may even, in very advanced periods of the disease, derive advantage from a well-regulated diet and other circumstances, by which his situation will be rendered much more comfortable than it otherwise would be; but in this situation a complete removal of the disease is scarcely to be expected: at least little dependence is to be placed upon the remedies usually employed for that purpose.

This very distressful stage of seminal weakness is often the consequence of Onanism long persisted in; and it is, as we have remarked, the frequent consequence of Gonorrhœa and Gleet. In all such cases the disease seems to proceed from real weakness, or debility in the excretory ducts of the vesiculæ seminales; for it commonly happens where the whole system is much relaxed and emaciated; where there is therefore no cause to imagine that it can arise from too plentiful a formation of semen; and of which, indeed, we often meet with a very decisive proof, from constant mucous-kind of oozing being perceived in the urethra, while no ordinary cause of excitement is capable of producing any regular discharge or emission of semen.

In this situation a variety of remedies are employed, chiefly with a view to restore and invigorate the tone of the weakened parts; such as bark, steel, balsamum copaiba, and cold bathing. At other times, where the disease is supposed to proceed from a deficiency of semen, provocatives are prescribed; such as high seasoned foods, all the terebinthinate balsams, and cantharides. But although I have had many opportunities of observing a complete trial of these, I never knew any advantage derived from them. The only course, which in such circumstances I ever knew prove useful, was such as merely tended to restore the patient to his usual state of health. If Onanism has induced the disease, nothing will afford even the chance of a recovery till this is left off. Whatever may have been the cause of it, he ought to be put upon a nourishing diet; and he should live in an elevated, dry situation. Sea-bathing should be advised; and costiveness, with every thing that might tend to irritate the parts chiefly affected, should be avoided.

With a view to lessen that degree of irritability with which this disease is usually connected, opiates have been advised; but although I have often given them a full trial, I never knew any real advantage obtained from them. On the contrary, they have often appeared to do harm; for although they procure rest, yet the sleep which they give is always disturbed; the patient awakes in a state of more anxiety and distress than he experienced on going to bed; and when opiates are habitually used, costiveness can scarcely be prevented by means of remedies, which, in this situation, ought not to be given.

Hemlock is often used here; but I have never known any obvious advantage derived from it. Hyocyamus, by acting as an anodyne, while it does not produce costiveness, has, in different instances, appeared to prove serviceable. One grain of the extract may be given at first, and the dose increased in a

gradual manner to three, five, six, eight, and even ten grains.

Conceiving, from some circumstances connected with the disease, as well as from many of the symptoms which ensue from it, that it may in some instances be of the same nature with paralysis, I have, in several cases, advised electricity, and in one or two of these it appeared to prove serviceable, but never so decidedly as to enable me to speak of it with confidence.

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#### S E C T. IV.

##### *Of Obstructions in the Urethra from Gonorrhœa Virulenta.*

WHEN speaking of Gleet we had occasion to observe that it is often the consequence of Obstructions in the Urethra. But Gleet, although the cause of some inconvenience and distress, is by no means the symptom of most importance with which Obstructions are accompanied. Strictures may take place in a certain extent, without giving much uneasiness, but whenever they arrive at such a height as to impede the flow of urine, they prove always the cause of distress and misery to the patient, and of much embarrassment to the practitioner.

Obstructions proceeding from Gonorrhœa Virulenta may be reduced to four general heads; tumours in the substance of the urethra and contiguous parts; spasmodic affections of the urethra; caruncles, or fleshy excrescences, in the urethra; and strictures, properly so called.

## § I

*Of Tumours in the Substance of the Urethra and contiguous Parts.*

WE have already had occasion to speak of Tumours, or swellings of the prostate gland, of swellings of Cowper's glands, and of the other smaller glands of the urethra. All of these produce obstruction to the flow of urine whenever they become of such a size as to diminish, in any degree, the magnitude of that canal.

Referring to what has already been said upon this part of our subject, I have at present to observe, that in the commencement of all Tumours in these parts, we ought, by every method in our power, to endeavour to remove them by discussion, for which purpose local and general blood-letting are the remedies chiefly to be depended on; and as these, when carried a sufficient length, and when assisted by a cooling regimen, and the external use of cold saturnine applications, seldom fail in removing them, they should always be persisted in as long as there is the least chance of their proving serviceable. For although tumours in this situation are often easily removed after suppuration has taken place, by the matter being freely discharged, and the sore treated in the usual way, yet, before arriving at this size, a good deal of distress always occurs from them, and, in some instances, the sores heal with difficulty, while in others the matter bursts into the urethra, where it continues often during the life of the patient to excite a great deal of distress.

In others again it bursts into the scrotum, and from thence into the surrounding cellular substance, and openings forming in consequence of this, commonly between the scrotum and anus, a very trou-

blesome disease is thus produced, termed fistula in perineo\*.

It is therefore obvious that it is much for the advantage of the patient that all tumours of this kind should be removed by discussion; but when our endeavours for this purpose do not succeed, and when suppuration takes place, we have it often in our power to prevent many of the bad consequences which otherwise are apt to ensue. By opening such tumours immediately on matter being perceived in them, we prevent the risk of their bursting into the scrotum and urethra, so that in this situation we ought never to wait till they are so fully matured as otherwise might be proper: and when once they have come so far as to render it proper to discharge the matter, it ought to be done, as we have formerly observed, by making an opening the whole length of the tumour. This prevents the matter from lodging, and from insinuating into the contiguous parts, while the sores which ensue heal more kindly than they usually do when smaller openings have been made.

Among other consequences which sometimes occur from matter bursting from abscesses in this situation into the contiguous parts, it is proper to mention that the most distressful effects occur from its finding access to the corpus cavernosum of the penis. It usually spreads suddenly over the whole substance of the penis; small openings take place in different parts of the swelling, at which the matter is discharged; and these are always very difficult to heal: or, if the matter does not find a vent in this manner, it either bursts into the urethra, or the surrounding parts are apt to mortify.

When mortification occurs in this situation it either soon proves fatal, or terminates in the entire loss of the penis; for a stop is seldom put to the disease till all the parts surrounding the urethra are destroyed, when amputation of the remainder becomes unavoidable. Indeed the hæmorrhagy which is apt to

\* For treatment of this, vide system of surgery, chapter xv.

occur from deep seated mortification of the penis is commonly of itself a sufficient motive for amputation being advised, for we can seldom put an effectual stop to the discharge till the mortified parts are all removed.

For preventing mortification in this situation from spreading, opium has been recommended. I have certainly observed it prove useful in gangrene, both in these parts and in others; but more dependence is for the most part to be placed upon a plentiful use of bark. Whether or not opiates act in the cure of gangrene as antiseptics, is not, or, perhaps, cannot be ascertained. I rather believe that they do not: and I am inclined to think that they prove serviceable only by allaying irritation. In this manner they may be employed with advantage wherever gangrene appears to be the consequence of a high degree of inflammation. By lessening or removing pain they may diminish the cause of exertion in the vessels of the part affected, and may thus tend to prevent mortification from extending so far as it otherwise might do; but I have never known them to prove useful where the disease seemed to depend upon the loss of tone, either of the part itself, or of the constitution:

## § 2

### *Of Spasmodic Obstructions of the Urethra.*

IRRITATION of the Urethra, from whatever cause it proceeds, has an evident effect in lessening the diameter of the passage. Hence, in cases of stone in the bladder, the irritation, and consequent contraction of the urethra, is sometimes so great that a staff, even of a moderate size, cannot be introduced. Stones in the kidney have frequently the same effect. Nay, I have known this contraction of the urethra induced by sand passing along the ureters. In like manner the irritation produced in the urethra by Gonorrhœa, is in some cases so great as to excite con-

traction of the passage in a very distressful degree. I have known the urine so completely obstructed by this alone, as to give cause to suspect that strictures were formed of the most alarming nature; in which neither staff, catheter, nor bougie, could be introduced, but with more force than can ever with safety be applied.

We judge that obstruction proceeds from this cause, when at one time it occurs in a severe degree, and soon thereafter, perhaps in the space of a few hours, it appears to be entirely or nearly gone. Of this I have met with various instances; in which, from the anxiety of the patient, and from suspicion of a more inveterate kind of stricture, repeated attempts have been made in vain to pass a bougie, and in which the stoppage has gone off entirely upon the exhibition of a dose of laudanum, or rubbing the perineum with anodyne balsam.

As the urethra itself does not appear to be muscular, as a small portion of it only can be compressed by the muscles of the penis, and as the obstruction of which we are now speaking occurs in parts of the passage where these muscles do not exist, it has been imagined that this temporary accession of stricture must be owing to some other cause. It may perhaps happen that the violent irritation excited by chordee may in some instances produce such effusion into the cellular parts of the penis as may compress the urethra; and that this may soon be removed by absorption, on the irritation by which it was produced being taken away. But although this may be the case in a few instances, I am convinced that it is not a frequent occurrence, and that the urethra itself is endowed with a contractile power, by which, for the most part, this kind of obstruction is produced.

Were it to proceed from any kind of effusion compressing the urethra, the tumefaction thus produced would be obvious. Partial circumscribed tumours would either be discovered in the course of the urethra, or the whole body of the penis or a considerable part of it, would be swelled. We do not find,

however, that this is apt to happen ; at least, in most cases of this kind no tumefaction of the penis is perceptible.

This kind of spasm or cramp occurs occasionally in every part of the urethra. I have met with it within an inch of the extremity of the glans, but for the most part it happens behind the scrotum, or nearer the prostate gland, in the membranous part of the passage.

In the treatment of Obstruction in the Urethra it is a matter of the first importance to determine the cause by which it is produced. It is particularly necessary to distinguish between obstruction arising from spasm, and that which proceeds from stricture of the passage. In the latter, bougies, as we shall afterwards see, are almost the only remedies upon which we can depend, while, in cases of spasm, they very commonly do harm. In the one they remove the disease by acting as wedges ; in the other they add to the violence of the contraction by increasing the irritability by which it was at first excited.

As the degree of obstruction produced by spasm alone is, in some instances, equal to what usually occurs from the most obstinate kind of stricture, it is only from an exact account of the rise and progress of the disease by which we can judge of the difference.

When the flow of urine has at first been perceived to be slightly obstructed, and when this has gradually become worse, without ever being in any instance materially better, there will be much cause to imagine that it proceeds from a cause of a fixed nature : while, on the contrary, however complete an obstruction may be, if it came on suddenly, and if it frequently becomes quickly well without any obvious reason, there will be no cause to doubt of its proceeding from spasm.

We find too, in obstruction proceeding from causes of a more fixed nature, that some pain is always discovered at one or more fixed points. In some cases a degree of hardness is perceived on the urethra being

pressed at these points ; while in others, although nothing can be discovered on external pressure, the patient feels a degree of heat and pain, as if the parts affected were excoriated, or even ulcerated. Besides, in real stricture, a discharge of matter very universally takes place from the urethra ; forming, as we have already had occasion to see, a very frequent cause of Gleet. But in obstruction proceeding from spasm, any pain which occurs in the urethra does not proceed from one point. It appears to be more diffused ; and is seldom in any distressful degree, if it be not by the stoppage which it gives to the flow of urine. No particular spot is discovered to be hard or sore upon pressure, and a discharge of matter does not necessarily take place in it.

Spasm, indeed, may be accompanied with a flow of matter from the urethra. This will always happen where Gonorrhœa or Gleet have previously existed ; but it will never, on enquiry, be found to be the cause of the discharge.

The remedies to be employed for the removal of this variety of obstruction are, warm emollients, anodynes, blood-letting, blisters, and electricity. Bougies, in certain circumstances, may be also employed.

Rubbing the parts affected, whether the perineum, or more interior parts of the penis with warm oil, proves sometimes useful, Oil, strongly impregnated with camphor, and Goulard's form of the unguentum saturninum, when applied warm to the parts affected, also tend to remove this cause of obstruction. I have sometimes known it instantaneously removed by fomenting the perineum with a decoction of chamomile flowers or althea, or by the application of a bladder filled with warm water.

The common anodyne balsam makes an useful application here. The parts in which the spasm is seated should not only be rubbed with it, but pledgets immersed in it should be kept constantly applied to them. But one of the most powerful antispasmodics among external applications is, a mixture composed of three parts of laudanum and one of æther.

Frequently, however, little or no advantage, is derived from the external application of anodynes; while opium, given internally, is productive of the best effects. Forty drops of laudanum, given by the mouth, will often remove a spasm of the urethra that has resisted every variety of this remedy applied to the skin; and when thrown up the rectum, in the form of injection, it proves still more effectual in removing pain, irritation, and spasm about the anus, and in the organs of urine and generation, than when received into the stomach.

Whether this may proceed from the remedy getting more nearly into contact with the nerves of the diseased parts, or whatever may be the cause of it, is perhaps difficult to determine; but, from much experience of their effects, I am convinced, that in all such affections, opiates prove most powerful when given in this manner.

In plethoric constitutions blood-letting is often the most effectual remedy, not only in carrying off the spasm which presently subsists, but in preventing returns of it in future. Besides the discharge of blood from the arm in quantities proportioned to the strength of the patient, leeches should be applied along the course of the affected parts, and they seldom fail where the constitution can support the evacuation, of giving very effectual relief.

From an idea of spasmodic affections proceeding in most instances from what is termed a weakness of nerves, and from a dread which very universally prevails, of all such affections being rendered worse by blood-letting, this is a remedy we find very rarely, employed. But it is proper here, as well as in similar affections of other parts, to observe, that morbid irritability may be excited by causes of a very opposite nature. It sometimes takes place where the constitution is relaxed and reduced; and, in such circumstances, evacuations of every kind very commonly do harm. But it more frequently happens from a state of plethora, in which blood-letting proves the

most certain remedy, and where opiates, warm bathing, and other antispasmodics are often used for a great length of time, without any effect resulting from them.

We find from experience, that a stimulus applied to the skin proves often useful in relieving pain and spasm, in parts that are very deeply seated; and upon trial, the same remedies are sometimes found to remove similar affections of the urethra. Obstructions of this kind have, in different instances, been relieved by the application of volatile liniment, a strong impregnation of oil with volatile alkali, to the parts affected. A blister applied over the perineum, has in different instances carried off obstructions of the urethra; and in some cases where blisters failed, the disease has been completely removed by the application of a warm plaster.

In such cases blisters do not seem to act so much by the evacuation which they produce, as by the irritation which they excite; for it often happens that the pain and spasm are removed as soon as the skin becomes in any degree uneasy, and long before vesications can be formed. Hence, a warm plaster, which does not contain such a quantity of cantharides as to render it capable of acting as a blister, by keeping up a more continued stimulus than blisters, proves, in some instances, more effectual.

Electricity has sometimes proved useful in removing spasm of the urethra; but it requires to be managed with caution, otherwise it is apt to add to the violence of the disease. In plethoric habits it always does mischief, and ought never to be advised in these till blood-letting has been premised.

I have had occasion already to remark, that in this variety of obstruction, bougies are very apt to do harm. This proceeds from their being pushed with violence, when the parts, from being under some high degree of irritation, are in a state of strong contraction. This ought never, therefore, to be done; for

while the parts remain in this situation we seldom succeed; or if we do get the bougie passed, it is always from the use of more violence than ought to be employed.

But bougies prove highly serviceable, even in Spasmodic Obstructions of the Urethra, when the violence of the disease is so far removed that they can be introduced with ease, and without exciting irritation: so that, whenever we find this can be accomplished, whether the spasm has been lessened by the use of emollients, anodynes, blood-letting, or any other remedy, it ought always to be advised. Besides the present relief which it affords, by removing any degree of the obstruction which may remain, it tends more effectually than any other remedy to prevent a return of it. This is particularly the case where spasm is conjoined, as sometimes happens, with the more fixed kind of obstruction, which we are presently to proceed to consider. When this takes place all our other remedies are to be considered merely as preparative to the use of bougies, which, in such circumstances, are alone to be depended on for a cure. It must always be remembered, however, that bougies are only admissible when they can be introduced and retained in the passage, without exciting much uneasiness.

In all diseases of the genitals the state of the intestines require particular attention. So much sympathy subsists between these parts that in people liable to obstruction in the urethra, I have known a severe fit of the disease induced by a costive stool. Neither is much purging necessary or proper. The bowels should be kept in such a state as to prevent irritation, as far as it can be done, in the rectum and contiguous parts.

## § 3

*Of Obstructions in the Urethra from Fleſhy Excreſcences,  
or Caruncles.*

**OBSTRUCTION** to the paſſage of urine has long been conſidered as one of the moſt diſtreſſful, as it is one of the moſt frequent conſequences of Clap; and Caruncles, Fleſhy Excreſcences, or Carnoſities, as they are ſometimes termed, are mentioned by all the older writers upon this ſubject, as the moſt frequent cauſe of it.

This idea naturally aroſe from their perceiving that warty ſubſtances were ſometimes formed within the urethra, near to its extremity, ſimilar in appearance to thoſe which often occur upon the prepuce and glans; and not proſecuting the ſubject by opening the parts after death, they were led to ſuppoſe that the more deep-ſeated obſtructions were all of a ſimilar nature.

So univerſally did this opinion prevail, and it was ſo ſtrongly aſſerted in books, that although it was long ago, by ſome individuals, particularly by Saviard and Dionis, ſuppoſed to be ill-founded, yet even in our times it has been very generally admitted. This is ſo far the caſe, that in common converſation upon this ſubject, Caruncles are uſually conſidered as the moſt frequent cauſe of all ſuch obſtructions.

It is now, however, very certainly known that this cauſe of obſtruction is an uncommon occurrence in the more remote parts of the urethra. Of late years this has become a very frequent object of anatomical inveſtigation; and I have reaſon to ſuppoſe, from all that I have yet heard, as well as from the reſult of my own inquiries, that it ſeldom exiſts farther up the urethra than half an inch or ſo from the point of the glans. Warty excreſcences are not unfre-

quently found towards the orifice of the urethra ; but I have seldom seen them, even in this situation, where they did not likewise prevail upon the glans and prepuce.

The obstruction to the flow of urine from this cause is seldom considerable ; but it always occasions much anxiety to the patient, from a fear which he is apt to entertain of its becoming worse.

When seated just in the opening of the urethra, as sometimes happens, I have, in different instances, been able to remove them with scissars, and with small ligatures passed round them ; but they are seldom so situated as to admit of our taking them off in this manner. Neither are we at liberty to destroy them by the application of escharotics, the irritability of the urethra rendering this a very hazardous attempt.

In all such cases we place our chief dependence upon bougies ; and, when duly persisted in, they seldom fail in effecting a cure.

Some difference of opinion has arisen as to the manner in which bougies act in removing these excrescences. In strictures of a different kind there is no cause for doubt upon this point, as they evidently act entirely as wedges, and prove useful in proportion to the extent of mechanical pressure which they afford ; but in the cure of Caruncles they have been supposed to act chiefly by inducing suppuration upon the diseased parts, and dissolving them in this manner.

It is obvious, however, that in the cure of these excrescences, there is something farther necessary than the formation of matter. Indeed instances occur daily, of their being constantly immersed in matter, sometimes proceeding from their own surfaces, and at other times from the contiguous parts, without their being diminished. I rather conceive that bougies, even in this variety of obstruction, operate partly by mechanical pressure, and partly by exciting inflammation in the excrescences. We

shall hereafter have occasion to see, that some of the remedies employed for the removal of warts in other parts, prove chiefly useful by making them inflame; and as bougies are well calculated for this purpose, I think it probable, that while they evidently answer a good purpose by the pressure which they afford, they prove likewise serviceable by exciting over these excrescences that slight degree of inflammation, which, in the treatment of common venereal warts very commonly makes them drop off.

§. 4.

*Of Obstruction in the Urethra from Strictures, properly so called; of Bougies, and Fistulæ in Perineo.*

IN the more fixed kinds of Obstruction, proceeding from Gonorrhœa, the diameter of the Urethra is lessened in two different ways. For the most part it is diminished by a thickening taking place at some particular point in the membrane of the passage itself or rather in the corpus spongiosum urethræ, in a similar manner to what frequently happens in the membrane of the nose in cases of catarrh. At other times the urethra is drawn together, or contracted, as if a cord was tied round it, without any other disease being perceptible.

In some cases, again, these two affections are conjoined; and we find, in the same person, the diameter of the passage lessened in one part by a mere contraction, and in another, by a swelling and thickening in the substance of the urethra itself.

Every part of the passage is liable to strictures; but they are more frequent behind and immediately above the scrotum, than in any other part. In some cases a single stricture only takes place; but when the disease has subsisted for a length of time, we very commonly find the passage contracted in different parts.

Where the urethra is merely drawn together, the disease seldom extends, at any one part, above the eight part of an inch, but where the stoppage proceeds from a swelling of the substance of the urethra itself, it sometimes extends to the length of an inch.

From whatever cause the stricture may proceed, we commonly find that the urethra is affected equally all round; but it is very properly remarked by Mr. Hunter, that, in some cases, the disease seems to be fixed entirely on one side of the passage, in which case the canal is thrown over to the opposite side.

This seems to happen only where the obstruction is produced by swelling of the urethra, and not where it proceeds solely from contraction.

Where this unequal diminution of the canal takes place, even in one part only, it is obvious that it must add greatly to the difficulty of introducing bougies; and where more than one affection of this kind occurs, if they be not exactly opposite to one another, a kind of twisting of the passage takes place, which renders the passing a bougie impracticable. It must, however be admitted, that instances of this are rare.

It is somewhat remarkable that the formation of strictures is often so gradual, that a patient is not sensible of their taking place till the disease has been of long continuance. Being seldom attended with pain till the flow of urine is much impeded, any partial degree of it passes without notice, by which they are apt to be rendered much more fixed and permanent than otherwise they would be. The patient, indeed, has seldom any suspicion of strictures, till the surgeon, for his own satisfaction, where Gleet continues more obstinate than usual, proposes to introduce a bougie. Gonorrhœ having given rise to the Gleet, any difficulty that occurs to the passage of the urine is considered to arise from the same cause; and thus a great length of time often elapses before any such examination is made as can with certainty lead to a discovery.

This proves often, in its consequences, highly distressful, and ought therefore to be as much as possi-

ble guarded against ; for strictures, by long continuance, become much more firm, as well as more extensive, than they were at first, by which they become much more difficult to cure. Cases which at first would have yielded almost to the first attempt with bougies, are, by delay, often rendered so obstinate that nothing will remove them but the most exact application of bougies being continued for a great length of time.

In all cases, therefore, in which there is the least cause to suspect that strictures may exist, an examination should be made with bougies. But as patients themselves are apt to be deceived upon this point practitioners ought, in every instance, to lead their attention towards it. In different parts of this work we shall have occasion to see that Gleet is frequently kept up by strictures ; so that whenever a running becomes in any unusual degree obstinate, if there be not some other evident cause for it, a trial with a bougie should be proposed. This, however, is seldom attended to ; by which much unnecessary trouble, as well as loss of character, falls upon the practitioner, while the patient is made to suffer a great deal of misery which might have been prevented.

We have already had occasion to remark that the strictures of which we are now speaking are consequences of Gonorrhœ ; but in what manner they are produced by Gonorrhœ is perhaps difficult to explain. They have been attributed chiefly to ulcers induced by the disease, and to inflammation,

At one period I was induced to suppose, chiefly from the information I had from books, that strictures were in most instances produced by ulcers. But from more frequent opportunities of observing the seat of Gonorrhœ after death, I am now convinced that ulcers very seldom take place here, by no means so frequently as strictures, the disease they are supposed to produce. It sometimes indeed happens, that the membrane of the urethra covering strictures, is found in a state of tenderness, or of excoriation, but not com-

pletely ulcerated. This appears too to be the effect of the disease rather than the cause of it, It seems to proceed, in some degree, from the tumefaction of the membrane of the urethra, which often occurs in strictures and in some measure from the acrimony of the matter which these very strictures produce.

When ulcers are met with in Gonorrhœa, they are in most instances, I believe, produced by the rupture, of one or more blood-vessels. If it be not at the very point of the urethra, they never proceed from the matter of Lues Venerea. Now we can scarcely imagine that any ulcer which the rupture of a blood-vessel in the urethra could probably produce, would be of such depth or magnitude as to be attended with any important consequence of this kind. Neither are hæmorrhages from the urethra frequent; nor have I found that strictures have been particularly apt to happen, even where hæmorrhages have taken place in an alarming degree.

I consider it, therefore, as decided, that strictures in the urethra seldom or never proceed from ulcers. Inflammation, when violent, may certainly tend to produce them; and I think several instances have fallen within my own observation where this actually happened. I do not suppose, however, that this is such a frequent cause of strictures as is commonly imagined, nor do I agree with those who think that injections often produce them.

As it was observed, that strictures were, in some instances, induced by inflammation, and injections being supposed, by those who are prejudiced against them, very apt to inflame the urethra, it was long ago asserted, and has since by many been believed, that they tend more frequently than any other cause, to produce strictures. This, indeed, is held forth as the most important objection to the use of injections, and were it in any degree well founded, I admit that it would be a strong reason for laying this remedy entirely aside: for however desirable it may be to have the running in Gonorrhœa quickly carried off, and

however efficacious injections may be, no practitioner would advise them were it to be with the risk of inducing such a formidable disease as strictures often are.

Where strong stimulating injections are ungardedly used, such a degree of inflammation may thus be induced as may be productive of the most obstinate strictures. But this is not the fault of the remedy, as I have elsewhere observed, being entirely the effect of an improper application of it. We might with equal propriety condemn the use of some of our most effectual and safest medicines, merely from an over-dose having done harm.

Instead of injections being a frequent cause of strictures, I have much reason to think that they are more effectual than any other remedy in preventing them. Although I have admitted that strictures are sometimes produced by severe degrees of inflammation, I do not consider this as a frequent occurrence. Strictures I conceive to be most frequently the consequence of a state directly the reverse of inflammation. In a great proportion of cases they will be found to take place, where, either from no injection being used, or from some other cause, the discharge has gone on to a very unusual length, where all symptoms of inflammation were gone long before, and where nothing but a Gleet remained. At least this has been very generally the result of my observation, and, I believe, it will be admitted by all who have paid attention to the point in question. I therefore conclude from this, as well as from the appearances which these parts exhibit on dissection, that this variety of obstruction proceeds most frequently from a state of morbid relaxation or debility, induced in these parts of the membrane of the urethra upon which the inflammation at first fixes with most violence, and from which the subsequent discharge is in a great measure produced.

Where stricture succeeds immediately to inflammation, it appears to be that variety of it in which the urethra is compressed, or tied, as it were, with a cord: but where it does not appear till the inflammation subsides, and the discharge has been of long duration, the substance of the urethra is found, at those parts where the

strictures exist, spongy, soft, and prominent, bearing every mark of having completely lost its tone.

The existence of this variety of stricture being ascertained, and it will not be confounded with any other disease where the observations contained in the preceding parts of this section are kept in view, our next object is to fix upon the method of cure.

While the opinion prevailed of strictures being most frequently produced by ulcers in the urethra, as this led to the suspicion of their being connected with Lues Venerea, mercury was advised in almost every instance. Mercurial ointment was regularly rubbed upon the seat of the disease, in order to dissolve the cause of the obstruction, and the patient was put under a salivation, with a view to the safety of his constitution.

As this was the prevailing practice of our best surgeons, both here and in other parts of Europe, when I entered upon business, I was necessarily led to adopt it; but late experience having shewn that mercury is never necessary in the cure of strictures, I have now for many years past laid it altogether aside. Nay, I readily own that I never knew any advantage derived from it, while in many instances, when long persisted in, it evidently did harm.

It will not be imagined, that during this late period of time, mercury was ever alone depended upon for the removal of strictures in the urethra. Bougies were then very generally employed; but mercury, for the reason I have mentioned, was always advised along with them. Bougies had long been known to practitioners, but they were so coarsely formed, and their application so little understood, that scarcely any advantage was derived from them, till Mr. Daran, about fifty years ago, brought them into more general notice. By forming them with care, and introducing them with address, Mr. Daran had the credit of giving us the only remedy upon which we can place any dependence for the cure of strictures. At least we are certainly in a great measure indebted to him for bringing them into general use.

It is true that Mr. Daran attributed virtues to his

bougies which they did not possess. Being much interested in the sale of them, he wished to throw a mystery, over their composition. They acted chiefly, he said, by their suppurative quality : in consequence of which, and by the great discharge of matter which they produced, tumours, and other causes of obstruction in the urethra, were, he alledged, dissolved by them, which could never otherwise have been removed. The confidence with which this was asserted, by a man of Mr. Daran's experience, and the considerable discharge of purulent-like matter which usually accompanies the use of bougies, gave weight to an opinion which at last came to be very generally adopted.

We now know, however, that it is not by exciting a discharge of matter that bougies act in the cure of strictures. Even the mildest bougie we can employ, when kept in the urethra for an hour or two, is covered with a kind of matter on being withdrawn ; but this happens as readily where the urethra is sound as when it is obstructed in various places, and it proceeds entirely from the natural mucus of the passage being increased in quantity, and somewhat altered in appearance, by the irritation excited by the bougie.

Even admitting the obstructed parts to be more particularly acted upon, and a greater discharge of matter excited from them than from the other parts of the urethra, and which Mr. Daran asserted to be the case under his management of the bougie, still this would not account for the removal of excrescences ; for we know, from daily observation, in other parts of the body, that the whole surface of excrescences of a similar nature to those which Mr. Daran supposes to take place here, may be kept in a state of complete ulceration, and a great quantity of matter discharged from them for a great length of time, without any diminution of their size.

Bougies, in the cure of these strictures, seem to act solely by pressure, and the support which they afford to the diseased parts. If a bougie, of sufficient firmness, exactly or nearly the size of the urethra in its contracted state, be passed at first, and others of a larger size af-

terwards introduced, we know from experience, that if done with caution, no harm will ensue, and that the stricture for which it was employed, will thus, in a gradual manner, be removed, merely by the pressure of the bougie.

In this view, our chief object in the forming of bougies should be, to give them a firmness sufficient to afford support to the parts which we wish to compress, and a smoothness and flexibility which will admit of their being introduced and retained in the urethra with the greatest possible ease.

Numbers 34, 35, 36, and 37, in the Appendix, contain prescriptions for bougies of different colours and consistences, with some directions for the method of preparing them; but the exact formation of bougies being a matter of the first importance, and this being only to be acquired by extensive experience, it is better for surgeons to procure them from those whose sole profession it is to make them, than to attempt to form them themselves.

Besides the forms of plasters mentioned in these prescriptions, other articles have been employed for the construction of bougies, particularly cat-gut and resina elastica. Of these the latter is by much the best, and for all the smaller kinds of bougies, I now find it to be preferable to the best bougies of the common kind. Even when of the smallest size, it can be made of such a degree of firmness as to admit of being pushed with considerable force, which is not the case with the smaller kinds of common bougies, which are apt to bend, and to become twisted, although introduced with much care and attention.

The great expence of bougies of this kind has hitherto prevented them from being so generally known as they ought to be: besides, they were at first made so soft that they nearly dissolved in the urethra on being allowed to remain in it for the space of an hour or two; but this fault is now so entirely removed, that I have known them remain in the passage seven or eight hours at once, and yet as firm on being withdrawn as when first introduced.

This renders it a valuable article, not only for bougies, but flexible catheters.

This resin has one very essential advantage over every composition that has yet been employed for bougies. It does not crack or break while in the urethra, however frequently it may be introduced. When the common bougies are prepared with much attention, and the composition of which they are formed is not too much boiled, they may sometimes be used two or three times with safety ; but, in most instances, they cannot with propriety be introduced more than once. Nay, many of them, on remaining an hour or two in the passage, are so much cracked as to excite a great deal of irritation and pain even on their first introduction, inasmuch that I have met with different instances where patients had been deterred by this cause alone from using bougies, the irritation which they excited being so great as to be perfectly insupportable ; while, on having recourse to those formed of *resina elastica*, they were found to create no kind of uneasiness.

These bougies are formed of fine silk, or linen, dipped in the resin dissolved in ether. They were originally invented by Mr. Thedn, of Berlin, and now are made by different artists in Paris. There is cause to regret that the art of forming them is as yet confined to a very few, so that our supplies have hitherto been both scarce and uncertain.

In the use of bougies the following are the points which particularly require attention :

1. They should be provided in such numbers, and of such variety of sizes, that there may be no doubt of as many being at hand as in any case may be requisite.
2. On proceeding to introduce the first bougie, care should be taken to fix upon one of such a size as will probably pass without exciting much pain. It is better at first to have it rather smaller than might be made to pass, than be afterwards under the necessity of withdrawing it. Of this we may in general judge by the size of stream in which the urine is observed to flow. It is often indeed found to be forked, and sometimes flat-

tened, owing to the form and nature of the stricture, but, with some attention to this circumstance, we may, for the most part, be determined in the size of bougie that will answer.

3. The patient should be placed in such a posture, as tends, in the most effectual manner, to relax the urethra. He may either be made to stand, with his thighs separated, and his body bent gently forward, or he may be laid upon his back, with his thighs not only separate, but raised. He ought, on no account, to be seated. In sitting the urethra is apt to be so much compressed that no space is left for the passage of a bougie. I have known several unsuccessful attempts to pass a bougie from this cause alone.

4. The surgeon being seated on the right side of the patient, should grasp the penis with his left hand, and, at the same time should draw it gently forward, so as to stretch the urethra to such a degree as may prevent it from catching the point of the bougie. With the bougie previously well oiled, in his right hand, he should insert the point of it into the urethra, when it must be passed slowly, though firmly on, till it meets with resistance. Neither should he desist at once on the stricture being met with. It answers better to continue to push on the bougie with a due degree of firmness, than to withdraw it immediately, as is often done. The first application of a bougie to the obstruction, is very apt to excite irritation and spasm, even in the stricture itself; and I have often thought that this was more easily overcome by pushing the bougie on at first than by any subsequent introduction of it.

5. A knowledge of the force that may with safety be employed in passing a bougie, can only be acquired by experience. The less violence that is done to the urethra, or to the cause of contraction, the better. It cannot, in some cases, be done without pain, but it should never be made to force a discharge of blood. When blood comes away, the instrument should be instantly withdrawn: for when this takes place, we may always be certain that some parts have been injured which ought not to have suffered, and by continuing to force on the bougie, that

there is a considerable risk of its forming a new passage for itself.

6. The distress which ensues from a new opening being formed by a bougie is apt to be so great, that nothing should be omitted that can in any way tend to prevent it. When there is cause to suspect, from the quantity of blood discharged, that the membrane of the urethra is injured, the bougie ought not to be again introduced for several days; not till there is reason to suppose that the wound in the urethra is healed, for, till this takes place, it is obvious that it would be very apt to renew the injury.

7. As bougies ought all to be of a conical form, they should not be pushed farther at first than freely through the first obstruction, otherwise the contracted part is apt to be torn open with too much force. It answers better to proceed gradually, and to increase the size of the bougie, or to push one of the same size farther on, in such a manner, as may avoid every risk of injuring the membrane of the urethra.

It is true that cures will be obtained where bougies have been introduced with much violence; where violent pain, accompanied with hæmorrhagy, has been excited: but this is a practice, which, for the reasons I have mentioned, ought never to be adopted.

8. The bougie being introduced, some attention is required to prevent it from slipping altogether into the urethra, as well as for retaining it in the depth at which it is inserted. We obtain the first of these objects by bending the end of the bougie, which, for this purpose, should be left at least half an inch out of the urethra; and the usual method of retaining a bougie in its place is, by tying a piece of soft cotton thread to the end of it, and fixing it with this either directly to the penis, by passing it once or twice round about the glans, or connecting it to the circular belt of a common suspensory bandage. But the most effectual method, as well as the easiest, which I have tried, is sitting the penis with a small bag or pouch of cotton or linen. The bougie being introduced with its end bent down, the bag must be put

over the penis, and being fixed with two pieces of tape to a circular belt round the body, the bougie is in this manner easily retained.

Common bougies being of no great value, may be cut of such a length as to leave half an inch or so out of the urethra, for the purpose of bending down in the manner I have mentioned; but those of the elastic gum should be kept of every variety of length, from three or four inches to nine or ten; and being easily formed with a knob at the large end, they are thus, in the most certain manner, prevented from slipping in.

When this caution has been neglected, and when a bougie is thereby allowed to slip completely into the urethra, it is sometimes, by the awkward attempts of the patient, forced altogether into the bladder.

In this situation, it cannot be removed but by cutting into the bladder, as is done in the operation of lithotomy, and extracting it with forceps. But while the bougie continues in any part of the urethra it may be taken out by an operation of much less importance and hazard.

When the end of the bougie can be seen, it may with some care and attention be laid hold of with a small hook, or with narrow-bladed forceps, such as are used for extracting stones that fix near to the end of the urethra. But when it has passed so far in, that it cannot be perceived, this method of extraction will not succeed.

In this case it can only be got out by making an incision upon it directly into the urethra. The skin should be first drawn back, when a cut should be made through the teguments and urethra at once, of at least half an inch in length, when, if the end of the bougie can be laid hold of, it may be taken out at this opening; or if this be not practicable, it may be pushed forward till the end of it passes out at the end of the urethra. This may be done either with small forceps or pliers, or by sticking a pin into the bougie at the opening, and pushing it slowly on. The wound for the most part heals easily.

10. The circumstances which next requires attention in the use of bougies is, the time they should be allowed to remain in the urethra, and the frequency with which they should be introduced.

As bougies act, perhaps, entirely in the cure of strictures by the pressure which they afford, and prove chiefly useful by the total change of stricture which they induce in the parts to which they are applied, they must necessarily require a considerable time for effecting this. The longer, therefore, that they are retained in the urethra, the sooner this will be accomplished. But while we attend to the removal of the stricture, care must be taken to prevent injury by their exciting too much irritation. This, indeed, is the circumstance by which we ought to be chiefly directed. It may be laid down as a general rule that bougies may be retained in the urethra as long as they excite no pain or irritation; while, in every instance, they should be withdrawn as soon as much pain is produced by them.

At first they can seldom be allowed to remain longer than half an hour at once; but, on the urethra being for some time accustomed to receive them, they may, for the most part, be left in it for several hours; and this may be repeated once and again during the course of the day.

11. During the time that bougies remain in the urethra the patient should be prevented from walking or moving more than is absolutely necessary. This is not usually attended to with necessary strictness, by which many are prevented from deriving that advantage from bougies which otherwise they would receive.

In walking, with a bougie in the urethra, the irritation induced by it is at all times considerable; but this, more especially, when common bougies are employed. The motion in walking is apt to crack and break the plaster of which they are formed, which renders their surfaces rough and unequal, by which it is obvious that much harm must be done.

12. In order to obtain the advantage of perfect rest while bougies are introduced, we are advised by many to employ them only at bed time, and to allow them to remain in the passage during the night. This may answer when the patient is not liable to nocturnal erections, but where these are apt to occur it ought never to be per-

mitted. I have known several instances of much pain and inflammation induced by it. It may, in some circumstances, be more convenient to apply bougies during the day, but it is evident that it may be done with more safety.

13. To admit as long a retention as possible of bougies in the passage, some have alledged, that the patient may, with safety, be allowed to void urine while they remain in it. I have known this done, and no harm ensue, where the urine was passed slowly, and with much caution : but I have also known the attempt do much harm, and, as the trouble of introducing the bougie a second time is not equal to the hazard of allowing it to remain, I always advise it to be withdrawn on a desire to void urine taking place.

Besides the pain and inflammation which want of attention in this matter is apt to induce, and erections occurring during the introduction of bougies have likewise this effect, I have known different instances of its appearing to lay the foundation of spasmodic affections of the urethra, which afterwards proved very obstinate, even after the original strictures were removed.

14. By gradually increasing the size of the bougie, the stricture through which it is passed will at last be removed ; but before it is entirely destroyed, it will be proper to push forward the bougie, to discover whether there is any other cause of obstruction or not. It is better, however, not to make the attempt till the opening through the first is considerably enlarged, when it will much more readily succeed.

Whatever other strictures are discovered, they must be managed in the manner we have advised for the first ; the bougie must, if possible, be made to pass through them all, and the size of it gradually increased till the urethra is opened to its complete, natural size.

15. In passing bougies for this purpose, it has been a point in dispute, whether they should be carried the length of the bladder, and allowed to remain in it or not. I am decidedly of opinion that they should be passed completely into the bladder, as soon as this can be done, in order to

discover the utmost extent of the strictures; but I also think that they should never be allowed to remain in the bladder. The common bougies are so apt to crack, and pieces of the plaster to fall off, that this might very possibly happen from their being immersed in urine; and we all know, that if a particle should drop, not small enough to pass off with the urine, that it would probably serve as a nucleus for a stone. This would not so readily happen with bougies of elastic gum; but even these, where there is so much hazard, ought not to be trusted, particularly as there is no real necessity for it in the management of strictures; for it is found upon dissection, that they are always seated anterior to the neck of the bladder. They are often in the membranous part of the urethra; but they have, perhaps, never been met with in the prostate gland, I mean in the urethra as it passes through this gland.

It must be admitted that the urine is often obstructed by affections of this gland; by inflammation, as well as by a more indolent kind of swelling, to which, as we have elsewhere had occasion to see, it is sometimes liable. But this variety of obstruction, instead of being removed by bougies, is always injured by them. We are sometimes under the necessity of passing a catheter, even during an inflamed state of the prostate gland; but this should only be done for drawing off the urine when it has been completely suppressed. When the gland has been for some time swelled in such a manner as to create a stoppage to the flow of urine, it is obvious, from its firmness, that bougies cannot remove it, while, by the irritation which they excite, they never fail to do harm.

16. Besides the length of time which bougies should be kept inserted daily, it is an object of importance to determine at what period they may, with safety, be laid aside. This, I must acknowledge, is difficult to do, as it depends upon a variety of circumstances with which it is impossible, at all times, to be acquainted. Even where the stricture is so completely removed that bougies pass with ease, and the urine is voided in a full stream, the disease is apt to recur if the bougies be too soon left

off. They should, in every instance, be worn for a considerable time after all appearances of stricture are gone, and the more obstinate the disease has been, the longer they should be continued.

Even after a patient considers himself as so entirely well that he may conceive no hazard to ensue from the farther use of bougies being entirely dropped, still he ought to have them, at all times, in his possession, so as to be able, on the least return of obstruction, to employ them instantly. This is a precaution not often adverted to, but which ought never to be disregarded by any who has suffered in this manner: and I think it the more necessary to insist upon it, from several instances having fallen within my own knowledge of the most distressful consequences ensuing from a neglect of it. It is more particularly proper for all people, in this situation, going upon a journey, to be well provided with bougies; for, when from home, they cannot always readily meet with them, while, at the same time, they are more exposed to the various causes most apt to excite a return of the disease. These particularly are, exposure to cold and dampness; much fatigue, whether on foot, horseback, or in a carriage; and excess in wine and spirituous liquors.

All of these causes act with such certainty in inducing a return of affections of this kind, that I have seldom known them fail where people have been much exposed to them; and, in most instances, their effect is perceived soon after their application. I have known a person, who, after being completely cured of strictures, for several years, has been seized with a very hazardous and painful return of the disorder, in the course of an hour or two after being much exposed to a cold, east wind. It is particularly apt to occur from violent exertion on horseback, and from being much overheated with wine; more especially from excess in port wine.

A return of stricture is also apt to arise from the urine being, at any time, too long retained after a desire takes place to pass it. This ought always to be guarded against; but I also think it right to mention, that pati-

ents sometimes err in getting into the habit of voiding urine too frequently. By yielding immediately to every impulse, such a habit takes place that they are apt, from this cause alone, to continue, during life, to pass it every hour or two. This proves not only very inconvenient, but it is also apt to induce a contracted state of the cavity of the bladder, together with a thickening of its coats; its full distension, which naturally ought to occur from time to time, being thereby prevented. Hence it is a matter of no small importance for patients, in this situation, to observe as just a medium as can be done between the two extremes which we have mentioned.

On the least return of stricture being perceived, whatever the cause may be, a bougie should be immediately introduced. The patient, if he is plethoric, should be blooded in proportion to his strength; his bowels should be opened with a gentle laxative, or with a clyster; and he should be kept in bed till the violence of the disease be removed. In this manner I have known the most formidable attack soon carried off, while, from treating them with inattention, even the most trifling symptoms have been rendered severe, and in the highest degree obstinate.

The sudden and unexpected manner in which patients are often attacked with a return of these affections, has given cause to suspect that they must, in such instances, proceed from spasm. But the obstinacy with which they often continue, as well as every other circumstance attending them, renders it obvious, that, in a great proportion of cases, they proceed from causes of a more permanent nature than spasm is almost ever found to be.

17. We have hitherto been supposing that the strictures are of such a nature as to permit a bougie to be passed with no great difficulty; in which case, no doubt can be entertained of our being able, by perseverance, either to accomplish a cure, or to afford at least very effectual relief, and to prevent any alarming obstruction from taking place to the passage of the urine; for however bad a stricture may be, if bougies of a small size can be passed at first, we may always be able, as I have already observed, in a gradual manner, to introduce those of a

larger size. But frequently, either from the passage being contracted to a very small size, or from the stricture being altogether on one side of the urethra, by which the passage is thrown over to the opposite one, after a variety of attempts we find no progress made, or if any thing is gained, it is so inconsiderable as to afford no kind of relief. This proves always very dispiriting to the patient, and is apt to dispose practitioners not much versant in this branch of business to desist from all further trials: considering the disease to be incurable, they prescribe a course of palliatives, which, for the most part, avail little, while the only remedy from which advantage could be expected is deserted.

This ought never to be done, at least it ought never to come on the part of the practitioner, nor can any thing warrant the measure but the patient himself being determined against the farther application of bougies. This, from impatience and disappointment, is apt to happen; but it ought, at all times, to be as much as possible resisted. Even in the most obstinate obstruction that occurs, if the passage be not altogether obliterated, a surgeon of experience will scarcely fail, if he be not prevented by the impatience or timidity of his patient from persevering for a due length of time.

18. When there is cause to suspect that the passage is thrown over to one side of the urethra, by the stricture being fixed in the other, a point in which we may sometimes be determined by external examination with the fingers, and most frequently by the feelings of the patient, the extremity of the bougie should be slightly curved or bent before being inserted, and the point of it being turned towards that side where the passage is understood to be, if carried on in this direction, we will sometimes succeed, when various attempts have failed in the usual manner. It will be readily supposed that the curvature given to the bougie must be very inconsiderable; but even the slightest will sometimes give it the direction which we wish it to take, while it does not prevent it from passing, with sufficient ease, along the urethra.

19. In the introduction of a bougie it ought to be

kept firm between the finger and thumb of the right hand, and pushed gradually forward till it reaches the stricture; but, when it has got this length, it commonly answers better to twirl it between the finger and thumb, taking care to push it gently forward at the same time. At least I often succeed in this manner when the usual method of pushing it directly on, has failed.

20. I have already observed that no more force should be used in the introduction of a bougie than is merely necessary for making it pass; but it is proper to remark, that, in the hands of a surgeon of experience, much more force may with safety be applied than others can, with any propriety, venture to employ. By pushing a bougie slowly and gradually forward, we often force it through strictures without any discharge of blood taking place, while much pain and laceration is sometimes produced even by less violence, when applied in a hurried or quick manner.

21. When we find upon trial that a small bougie, nearly the size of the opening, is made to pass, no force will be afterwards required, if the bougies be gradually increased in size. But when we find, upon repeated trials, that the remaining passage cannot be discovered, and when we therefore mean to employ more force, a bougie of greater strength should be used in place of the smaller one. The small-sized bougies, particularly those of the common kind, are so easily bent that they should never be employed where much force is required. I have known even surgeons of experience push forward bougies of this kind, and concluding that they had passed the stricture, have carried them on till they imagined they had nearly reached the bladder, when, on being withdrawn, they were twisted up in the form of a corkscrew, having never gone farther than the stricture.

With a firm, well-polished bougie of elastic gum, well rounded at the end, and not smaller than a crow's quill, such a force may be applied as will often succeed when no advantage can be derived from those of a smaller size; and we should not be deterred from proceeding, although the first trials prove unsuccessful; for we often pass the

stricture by perseverance when no advantage was gained at first.

I have reason, indeed, to imagine, from what has happened in the course of my own practice, that few cases will occur which may not ultimately be cured by bougies. But when they do, in what manner are we to proceed? When every trial that we dare venture upon with bougies fails, what are we to do? This, it is evident, must depend entirely upon the state of the parts affected, and upon the degree of obstruction which takes place.

If there is still such an opening left as admits of the urine passing off with tolerable ease, I would advise nothing farther to be done. A patient, in such a situation, had better submit to the inconvenience of passing it slowly, and even frequently, than to the operation of removing the stricture, which consists in laying the obstructed part of the urethra open, and in the frequent introduction of a bougie during the process of the reunion of the divided parts. This, however, is an operation of much importance: it is attended with so much pain, and with such uncertain success, that no practitioner of experience would recommend it while the urine is not totally obstructed; and long before this could probably happen the situation of the parts lying between the stricture and the bladder is commonly such as to induce the patient to submit more readily to any operation that may be necessary than he ever would have done in a more early stage of the disorder. Whenever the stricture occasions much difficulty to the flow of urine, that part of the urethra lying between the stricture and bladder, is necessarily distended on every attempt to void urine. This frequent stretching at last weakens the lining membrane of the urethra; the urine is at first in small quantities, and afterwards in larger, forced into the surrounding cellular substance: this, forming one or more small tumours, at last bursts out through a corresponding number of openings, either in the perineum, or in the cellular part of the scrotum. At least this is the usual progress of such tumours when the strictures in the urethra, by which they were produced, cannot be removed.

This is the most frequent cause of the disease we have already had occasion to mention, *Fistula in Perineo*, in which the urine continues to flow out at the newly forced openings, as long as the strictures in the urethra are allowed to remain, and which accordingly, as we have already observed, makes the patient easily submit to whatever may be necessary for removing them. In such circumstances nothing will prove successful if the diseased parts be not freely laid open. A staff being introduced the length of the stricture, and a small probe passed in at one of the openings, and carried to the opposite side of the stricture, the intermediate space should be laid open by an incision in the direction of the urethra. In this manner the cause of obstruction will be discovered and removed, and the other sinuses communicating with the urethra being likewise laid freely open, a cure even of the worst cases that occur, may thus be frequently obtained. To enter more fully into the consideration of this operation, and of the after treatment of the fores, would here be improper, as it would extend this article to too great a length. It could not be done with precision and clearness without entering upon the general doctrine of *fistula*, and upon different methods of cure that have been proposed for it; and as this has been done in a different work, I must now refer to what I had then occasion to say upon it\*.

Before concluding the consideration of strictures in the urethra, I think it necessary to notice a method of cure that has been proposed where we fail in the introduction of bougies, the repeated introduction of caustic into the urethra, with the view of destroying the cause by which the stricture is produced.

This practice prevailed upwards of a hundred years ago, but was soon relinquished. It has lately, however, been revived, or rather a proposal made for reviving it, by Mr. Hunter of London, under whose direction, it is to be hoped that it will soon become as generally useful as we can ever expect it to be. But as I consider this prac-

\* V. *System of Surgery*, chapters xv and xx.

tice as more or less hazardous, and not likely to prove often effectual, I shall briefly state what leads me to form this opinion, that others may be on their guard against too implicit an adoption of it.

The introduction of caustic into the urethra must prove hazardous from two circumstances, our not being able, even with all the pains we can take, to apply it to the stricture alone, without injuring the contiguous parts of the urethra, and the risk which there must always be of some small portion of the caustic breaking off and being left in the passage.

Mr. Hunter has indeed invented a very neat apparatus for the introduction of caustic. It consists of a silver tube, open at both ends, nearly the thickness of a common catheter, with a port-crayon, somewhat longer than the tube, into which the caustic is fixed. A stillette, with a perfectly-round end, is first passed through the tube, and if it be exactly fitted to the end of it, the two together may be carried with perfect ease along the urethra till they come in contact with the stricture, when the stillette to be withdrawn, and the port-crayon, with the caustic fixed in it, introduced. The caustic being applied to the stricture for about the space of a minute, must be withdrawn along with the instrument, and this must be repeated every two or three days till the cause of obstruction is removed.

This, from description, appears perfectly simple, and of easy execution: but notwithstanding the ingenuity of the invention, it is obviously liable to the two objections which I have mentioned. We know even where parts are uncovered, and therefore immediately under view, that it is exceedingly difficult to destroy diseased parts with caustic, without injuring the contiguous sound parts. In the urethra, therefore, where we receive no advantage from the eye, and where the slightest deviation of the instrument may fix the caustic upon the urethra itself, instead of the stricture, there must evidently be a good deal of hazard from this circumstance alone, independent of the chance of injuring the contiguous parts merely by the spreading of the caustic, admitting it to be applied with all manner of exactness.

Besides, as the size of caustic that can be passed in this manner is necessarily very small, there must always be some hazard of its slipping out or breaking off, an occurrence from which the highest degree of distress would ensue; for it could not be extracted, and dilution could not be employed with such effect as to prevent it from doing a great deal of mischief.

Another very important objection occurs to this practice. A great proportion of all strictures, perhaps nearly ninety of a hundred, are seated beyond the curve of the urethra, to which an instrument so straight as a tube acting as the conductor of another body ought to be, cannot be carried. But Mr. Hunter, foreseeing the difficulty, has endeavoured to remove it by proposing that the end of the tube should be flexible, and of the same form with the common flexible catheter of silver. But this, while it apparently adds to the ingenuity of the invention, renders it evidently more hazardous. The small point of caustic contained in the port-crayon will be more apt to be broken or loosened in passing through a curved tube than through a straight one, while it will not be possible to apply it to any one point with such firmness and steadiness.

But even admitting that caustic may with safety be conveyed to strictures in the urethra, yet, in those cases which do not yield to the use of bougies, the obstruction is generally of considerable extent, and the quantity of caustic necessary for removing it so great, that the contiguous sound parts of the passage must be much injured, whatever care and attention we bestow in the application of so active a remedy. On these accounts, it would appear, that for the removal of strictures in the urethra, the application of caustic is either impracticable or unsafe. In all slight obstructions of the urethra, a degree of force may be used with bougies, sufficient for removing them. Whenever this can be done, no person will doubt of the propriety of preferring them to the use of caustic; and when the cause of obstruction is of such extent as to render our attempts with bougies unsuccessful, there will be little or no room to hope that caustic

will answer the purpose. In other parts of the body we all know how difficult it is to remove even the callous edges of an ulcer with caustic. Nay, in many instances, new parts seem to form before the eschar produced by the previous application of the caustic has come off. I have no hesitation, therefore, in saying, that in similar affections of the urethra, proceeding to the extent which we here suppose them to do, caustic would either be altogether inadequate for the purpose, or must be applied in such quantities as would be attended with a great deal of hazard.

In all such circumstances, I consider it as preferable to let the disease take its usual course. The worst that can happen is, the formation of sinuses behind the strictures, and the discharge of urine from the openings which these produce. Few patients incline long to submit to this; but I consider the cure of this state of the disease, by the mode of treatment already pointed out, as more certain, while it is obviously much less hazardous than the means proposed for preventing it by the application of caustic.

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## S E C T. V.

### *Of deranged Sensations in the Bladder, Urethra and contiguous Parts.*

ON the running and other leading symptoms of Gonorrhœa becoming moderate, all the others usually abate, and the patient, for the most part, is perfectly well, soon after the discharge leaves him.

This, however, is by no means universally the case, for it sometimes happens that a good deal of distress remains long after the discharge is completely removed, and as the symptoms which take place in this state of the disease are of a nature which cannot be referred to any particular head, I have judged it proper to speak of them in a separate section.

Without any fixed pain, a patient, who, from the dis-

charge and other symptoms of Gonorrhœa leaving him, has cause to imagine that his cure is completed, will be suddenly seized with uneasiness over his loins; painful feelings over all the region of the bladder, particularly about the neck of it; sense of weariness on the region of the kidneys, which sometimes becomes much pained; a considerable degree of uneasiness over the whole course of the urethra, particularly about the glans, and a painful sensation of rolling, and other unusual motions, in the testicles.

In some cases these symptoms, which seem to be confined to the organs of urine and generation, take place either in whole or in part by themselves. At other times they are conjoined with affections of other parts, chiefly with those of the stomach and alimentary canal. In one case they were accompanied with regular attacks of cholic, which had all the appearance, from the violent degree of pain which occurred, of proceeding from inflammation, but which always subsided immediately on the symptoms being removed by which it seemed to be induced. In different instances I have known sickness and vomiting succeed to that painful uneasiness to which patients in this situation are sometimes liable in the kidneys.

Distressful feelings frequently occur in the rectum, which give cause to suspect, in some instances, that they proceed from piles, and in others from tumours forming in the end of the gut. A painful tenesmus often accompanies this set of symptoms.

In some almost every symptom occurs which usually takes place in stone in the bladder. A dull, heavy pain is felt at the neck of the bladder, which spreads along the urethra, and fixes upon the glans. The patient is distressed with frequent desire to pass water, and in passing it, it often stops suddenly when coming off in a full stream.

In a few cases symptoms of paralysis occur, both in the bladder and urethra. The patient at one time finding it difficult, or even impossible, to force the urine out of the bladder, while at others, it runs off in drops, without his being able to retain it.

These unequal states of the power of passing and re-

taining the urine will sometimes occur alternately, several times in the course of the same day ; while at times one of them will continue for several days together, and at last will disappear suddenly, after having resisted every remedy that had been employed for it.

It will readily be supposed however, that all of these symptoms cannot probably occur at the same time in the same patient, but every practitioner must have met with all of them in different patients.

At the same time that they take place with some variety, they likewise occur in very different degrees. In some they are so slight as merely to excite some trifling degree of uneasiness, and so transient, that they come and go frequently in the course of the same day ; while, in others, they are so fixed and permanent that the patient remains in a state of constant distress, and experiences such a degree of it as he is scarcely able to support.

In women, the bladder, kidneys, and abdominal viscera, are equally liable to be affected as in men ; and they are also apt to be distressed with uneasiness about the neck of the womb, and bearing-down pains, stretching to the thighs.

Even in the most firm-minded people the symptoms I have described prove frequently very distressful ; but where the mind is weak, and the imagination easily affected, they arrive in some instances at the most alarming height. In whatever degree they may appear, they are attributed to the preceding disease having either been improperly treated or not completely cured ; and when this occurs in a mind prone to fears and anxiety, the distress which they are apt to excite, is in some instances so great, as can scarcely from such a cause be supposed to exist. Whether a course of mercury be advisable or not, the patient is never satisfied till this medicine be prescribed ; for he is always afraid that his constitution will be ruined if mercury be omitted. If this proves successful, or if he gets well when under it, he remains completely satisfied ; but when this does not happen, as is the case in most instances, he then believes that he is incurable, and that his situation is desperate. Every variety of nostrum is now had recourse to : by the effect of these, and still

more by the agony of mind under which he labours, his constitution at last begins to suffer; he gradually becomes weaker and emaciated; and if his life is prolonged, it is almost always a scene of anxious inquietude and distress.

The cause of all or any of these symptoms it is often impossible to explain. Were they to happen chiefly where the previous inflammation has run high, or where the patient, when under cure, had been particularly apt to indulge in venery, excess of wine, or bodily fatigue, one or other of these causes would tend to account for them. But this is by no means the case. They are met with as frequently where the disease has been of a mild nature, and where it was cured in an easy manner, as where the symptoms have been severe and obstinate. Where this takes place we are apt to suppose that they are mostly, if not entirely, of an imaginary nature, and to treat them accordingly. This, to a certain degree, may often be proper, as it may fortify the mind of the patient against those ill grounded fears to which he might otherwise be exposed; but we are not to suppose that symptoms of this kind are always ideal, merely from our not being able to account for them, or from the previous Gonorrhœa having been of such a mild nature as we may imagine ought not to have produced them. I met with instances of this, where the previous disease was exceedingly mild, and where no obvious affection of the parts was perceptible, and yet the violence of the distress in such a degree as kept the patients in a state of constant misery.

Many of the symptoms enumerated above are such as are produced by tumours about the neck of the bladder, particularly by affections of the prostate gland, and by a contracted state of the bladder itself. In such cases, the cause of the disease is at once rendered obvious by examination with the finger in ano; but at present we are supposing that no organic affection can be discovered either inwardly or outwardly, an occurrence by no means uncommon, and in which I therefore conclude that the symptoms proceed from a deranged state of the nerves, produced by the previous affection of the prethra.

I have accordingly arranged all of them under one general head of Deranged Sensations, nor is there cause, from the nature of the remedies found to prove most successful in removing them, to treat of them separately, nearly the same general treatment being found to answer in all of them.

Before proceeding to enumerate the remedies for affections of this kind, I may observe, that although we cannot in any case say positively what will accomplish a cure, I can with certainty say what will not answer. I have already remarked, that patients, in this situation, are apt to suspect that their symptoms proceed from the previous disease having been improperly treated. This leads them to imagine that a latent poison is still lurking in the constitution, and mercury being the only certain antidote for the venereal poison, they always insist upon this being prescribed. Some practitioners, still entertaining the opinion of Gonorrhœa and Lues Venerea proceeding from the same infection, consider it necessary to prescribe mercury for all the consequences of each of them, while others are readily prevailed upon, by the solicitation of their patients, to permit what they may suppose it would not be in their power to prevent. But from all the experience which I have had of it, I am clearly of opinion that no advantage is ever derived from it, while, in a great proportion of cases, it evidently does harm. By relaxing the constitution it renders, it much more irritable than it was before, and thus tends to aggravate all such symptoms as those we are now considering.

The remedies upon which we chiefly depend are, blood-letting, opiates, warm bathing, blisters, cicuta, hyocyamus, electricity, Jesuit's bark, and cold bathing.

When the constitution is already much reduced and debilitated, blood-letting must necessarily be inadmissible; but whenever plethora takes place, nothing proves more useful than blood-letting, both general and local, particularly the discharge of blood from the perineum, and parts contiguous to the anus, by the application of leeches. In such circumstances it removes or lessens irritability with more certainty than any other remedy. Even

where there has been cause to suspect a tendency to paralysis in the bladder and contiguous parts, leeches applied as near as possible to the seat of the disease have proved serviceable ; nor need we ever hesitate in advising them where the patient is not much emaciated. But the remedy which, in all affections of this kind, proves most universally useful is opium. It not only soothes and allays the present distress, but when, by a well-judged, timely application of it, we can, for a week or two together, prevent the accession of pain, we in this manner often accomplish a cure. It answers the purpose whether it be given by the mouth or in clysters, but it proves always most effectual when given in sufficient doses by the anus.

The external application of laudanum, and of anodyne balsam, in some cases affords relief, particularly when conjoined with æther. In those deranged sensations which sometimes occur in the perineum and about the neck of the bladder, immediate relief is often obtained by rubbing the parts affected with a mixture of warm laudanum and æther ; and I have known the suppression of urine, which occurs from this cause, relieved in the same manner.

When opiates fail in procuring relief, or when they disagree with the patient, the semicupium sometimes succeeds. Warm fomentations applied to the perineum, and over the loins, often prove useful ; and the steams of warm vinegar, conveyed with attention to the parts affected, have likewise been used with advantage. The best article we can employ in such cases for fomentations is a strong decoction of the heads of poppies.

Blisters, in all such affections, are perhaps the most effectual of all our external applications. It is chiefly, however, where the urethra seems to be the seat of the disease that they prove useful, and where the neck of the bladder is affected with such a degree of weakness as prevents the urine from being retained by it. In the former, blisters act with most advantage when applied to the perineum, and in the latter they should be applied to the loins. The most distressful sensations produced by this cause, and which for many years have obstinately resisted

every other remedy, have, in some instances, been removed by the application of a blister to the perineum. In some cases one proves sufficient; but in others they require to be repeated once and again before all the symptoms disappear.

Upon the same principle with blisters, exciting a return of the running after it has stopped, or after it has been diminished in quantity, has at times been productive of some benefit. This may be done by fomenting the penis and perineum with warm water, the application of warm poultices to the perineum, and by a cautious use of bougies. The practice was probably suggested by symptoms of this kind having in some instances been removed by the patient getting a fresh attack of Gonorrhœa from a new infection, different cases of which I have met with.

In all such instances, where the inflammation recently induced is considerable, the previous symptoms are either much diminished in violence, or entirely removed. This would lead to the practice of exciting an inflamed state of the parts in a considerable degree, and which bougies will never fail to do, if covered with oil of turpentine, with a small quantity of common resin melted in it; but as it is obvious that much harm would ensue from this practice being carried any great length, it ought to be managed in every instance with the greatest delicacy and attention.

It may be proper to remark, that it proves chiefly useful where the disease is confined to the urethra; although, in some cases, it has succeeded even where the bladder and kidneys have been affected.

Where the urine in such cases passes off involuntarily, blisters, we have said, answer with most certainty when applied to the loins. This probably proceeds, from the disease in these instances raising, for the most part, from an affection of the bladder itself; but where it proceeds, as it may sometimes do, from a tendency to paralysis in the urethra and muscles connected with it, blisters will prove most useful when applied to the perineum.

Where the urine passes off in this manner, balsam of copaiba, and other astringent balsams, are usually given. They are supposed to act chiefly by restoring the tone

of such parts as appear to be relaxed and weakened, and which it is imagined they must do, from their having a peculiar tendency to pass off by the organs of urine. In like manner the internal use of cantharides is prescribed, from an idea of this symptom depending, in every instance, on a loss of tone in the parts affected, and from our knowing, that in most cases, cantharides proves a powerful stimulus both to the kidneys and bladder.

All of these balsams, as well as the common turpentine, which are not essentially different, may in all such cases be used with safety. In some instances they may perhaps prove useful, and I do not imagine they will ever do harm. This, however, cannot be said of the internal use of cantharides. In large quantities they act as a poison : and even where managed with caution, the principal of the practice seems, in such cases as we are now speaking of, to be doubtful ; for as there is cause to suppose that the disease proceeds more frequently from too much irritability about the neck of the bladder and urethra, than from any deficiency of tone, there is reason to fear, that by increasing the sensibility of the parts affected, they would in many instances be more apt to do harm than good. It is therefore proper, previous to the internal exhibition of cantharides, to determine with accuracy whether the disease proceeds from real weakness or morbid irritability. In the one case they may sometimes prove useful ; in the other they will be apt to add to the violence of the disease.

Cicuta has been frequently prescribed here ; and when given to such extent as to act as an anodyne, it may sometimes prove useful. Upon the same principle, hyocyamus may with propriety be prescribed ; but we have no reason to suppose that either of these articles act in any manner in curing the disease. As no organic affection appears to take place here, they cannot act by dissolving hard or enlarged parts. Any advantage derived from them will therefore be nearly in proportion to the anodyne effects which occur from them ; and in this view, they may prove useful when opiates disagree with

the stomach, as in such circumstances it is of consequence to have it in our power to employ remedies of a similar operation.

Electricity has now and then given a temporary relief to symptoms of this kind. It should be exhibited in the form of sparks drawn from the parts chiefly affected, particularly from the perineum, and parts most contiguous to the neck of the bladder.

It is proper however, to remark, that the same observations are applicable in advising electricity that were made upon the internal exhibition of cantharides. Both of these remedies, as well as the application of blisters to the loins, have been chiefly prescribed, where, in affections of this nature, the urine passes off involuntarily, and they are advised upon the idea of this symptom proceeding from paralysis of the neck of the bladder. But as there is much cause to imagine that the frequent discharge of urine, which patients in this situation are sometimes distressed with, proceeds more from irritability in the neck of the bladder than from real weakness, there is reason to think that electricity, by increasing the sensibility of the part affected, and which, in many instances, it evidently does, will rather tend to aggravate the complaint.

Blisters, whether applied to the loins or perineum, may prove useful, not merely by the discharge which they excite, but by the irritation which they produce upon the skin. There is nothing more certain than our being often able to remove pain and irritability from one part by exciting it in others. Of this we have frequent proofs in the application of blisters and other stimulants, in deep-seated pain in the side, where the distress is often removed as soon as the skin becomes warm and uneasy, and long before any vesications are produced. Sinapisms applied to the feet, have, in some instances, removed head-ach when every other remedy has failed. In like manner blisters seem to operate when applied to the perineum, for the removal of those sensations to which patients in this situation are sometimes liable. But electricity, as well as the internal use of cantharides,

by tending to irritate the very parts in which the disease is seated, seem often to increase the violence of the symptom they were meant to remove.

By a due perseverance in the use of one or other of these remedies we commonly succeed in lessening or even in removing the violence of the distress; but as the symptoms are apt to recur, even after the patient considers himself as well, it becomes an object of much importance to obviate this. For this purpose, nothing proves so effectual as Peruvian bark and cold bathing. A free exhibition of the bark should therefore be prescribed, as soon as the pain and other symptoms have begun to diminish, and sea-bathing should be advised whenever it can be obtained. When this cannot be procured, cold water should be applied locally, both to the perineum and loins. Some advantage is derived from the parts being bathed with it, but it proves more effectual when forcibly dashed upon them.

An involuntary discharge of urine, which we have already had occasion to speak of, proves always troublesome; but the distress which it excites, is trifling when compared with what arises from the patient not being able to expel it. Even without any inflammation, and where no cause of obstruction can be discovered in the urethra, a patient will sometimes find it impossible to pass a single drop. This, no doubt, occurs frequently from other causes; but every now and then we meet with it as an evident consequence of irritability in the parts chiefly affected in this disease.

All the remedies we have already advised will be equally applicable in the treatment of this symptom, as for the removal of any of the others. Opiates, however, and warm bathing, prove chiefly useful; but when relief is not soon obtained, it becomes necessary to draw the water off with a catheter; and, as much harm is apt to ensue from this being long delayed, it ought to be advised as soon as the bladder appears to be sensibly distended.

In some cases the introduction of a bougie will prove effectual; and as this gives less pain and irritation than

the passing of a catheter, it ought in the first instance, always to be preferred. One of the largest that will easily pass should be made use of; and, after allowing it to remain in the bladder for a few minutes, the patient should be desired to pass his water instantly on the bougie being withdrawn. This ought not to be done with much force and pressure, otherwise the neck of the bladder and urethra are apt to contract instantly on the bougie being taken out; while the whole will pass completely off if it can be made to flow easily at first, along with the bougie.

When this our intention in employing bougies is frustrated, we are under the necessity of employing the catheter; and, as it is of much importance, in all such cases, to prevent irritation as far as it can possibly be done, catheters of *resina elastica* should be employed, instead of the common instrument of silver. It not only passes more easily, but when any difficulty occurs in getting it into the bladder, it may, in some instances, be proper to allow it to remain for a day or two together, which can never, with any propriety, be done with catheters of silver.

The practice of leaving catheters in the bladder is spoken of by some with much ease, and they advise it wherever any permanent stoppage occurs to the urine; but I have in different instances seen so much mischief produced by it, that it is a measure I never advise but where much pain and difficulty occurs in the introduction of a catheter. In most instances, more pain is experienced from the instrument being allowed to remain in the bladder, than ever occurs from its being frequently passed. Besides the irritation, which even the smoothest and softest instrument of this kind excites, they are apt to prove hurtful by incrustations of calculous matter forming upon them, in consequence of depositions from the urine. There are few people whose urine is so free of this kind of matter as to prevent a catheter, inserted into the bladder, from becoming rough with it in a very short space of time. This practice, therefore, ought never to be adopted but where the

greatest difficulty is experienced in introducing the catheter.

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## S E C T. VI.

*Of Swellings of the Testicles.*

A Swelling of one of the Testes is a very frequent occurrence in Gonorrhœa. From the resemblance which it bears to a hernia, and from its being supposed to proceed from the running or humour in Gonorrhœa falling down upon the testes, it is usually termed a Hernia Humoralis.

In some instances both testicles swell. They seldom, however, swell both at once ; but the swelling, on leaving one testicle, is very apt to go to the other ; and when both have in this manner been affected, they sometimes swell alternately for a considerable time together. I have known this happen for the space of a year and upwards, where the patient, during the whole period, was never completely free of the disease.

In long continued affections of this kind, the pain becomes inconsiderable ; but the first attack of the disease is always accompanied with severe pain. The first warning which the patient receives of it is a very painful sensation in one of the testes, striking along the spermatic cord, near to the middle of his back. On examining the testes he finds it swelled, and so tender that he can scarcely bear it to be touched. He feels himself hot, and a general uneasiness prevails over his whole body, particularly over his thighs and abdomen. Neither can he move without increasing the violence of every symptom.

At first the swelling is confined to the epididimis ; the back part of the testicle feels hard and enlarged ; but in a very short space of time, often in the course of an hour, the whole body of the testicle becomes swelled. In this state of the disease a difference is still perceptible between the testis itself and the epididimis. The latter is hard, and somewhat unequally so ; being, for the most

part, hardest and most prominent at the bottom, whereas, a soft uniform swelling prevails over all the anterior part of the testicle.

In the progress of the disease, indeed, even the testis itself becomes hard, and if the means employed for preventing it do not prove successful, the swelling of the epididimis and testis together come to form a tumour of very considerable magnitude, accompanied with a red inflammatory affection of the scrotum.

In this state of the disease, the pain is often intense, accompanied with a very distressful sensation of the testis moving or rolling about. The skin is dry and parched, the tongue foul, thirst prevails, and the pulse is full, and quick. In short, every symptom takes place which usually attends a high degree of local inflammation.

There is no period of Gonorrhœa in which this affection of the testes does not occasionally supervene. It occurs in all stages of the disease; even towards the end of it, when both the patient and surgeon are apt to consider the cure as nearly complete: and in some we find it take place where no cause can be assigned for it, where neither the degree of the previous inflammation, nor the mode of life of the patient, were such as could in any satisfactory manner account for it.

It is proper, however, to remark, that swellings of the testis which take place in this manner, seem, for the most part, to be of a very different nature from those which occur during the virulent state of the disease, and while the inflammation in the urethra is considerable. The latter appear to be altogether inflammatory. The disease proceeds more slowly to its height or acmé. It remains more permanently at the size to which it arrives, and it disappears more slowly than the others, which come to their utmost height, in some instances, in an hour or two from the first approach of the swelling, and again disappear with equal rapidity. These I conceive to be partly inflammatory, and that in part they proceed from that kind of sympathy which evidently subsists between the penis and testis, and which renders the one very apt to suffer from any disease with which the other may be affected. That sympathy has much influence in the pro-

duction of this variety of the disease, is obvious from the swelling being apt to leave one testis, as we have already observed, and to fix, perhaps instantly, upon the other. This does not occur so frequently as the alternate affection of the eyes, from one of them only being at first affected, but every practitioner must have met with instances of it.

As it is observed that the running in Gonorrhœa is apt to stop on the first appearance of a swelled testicle, this gave rise to the idea of the affection of the testis proceeding from the matter falling down upon it, in consequence of being thus obstructed in its passage through the urethra. It is now well known, however, that no communication subsists between the urethra and testes, by which matter can pass from the one to the other; nor does the appearance which a swelled testicle affords, give reason to imagine that it proceeds from this cause. Instead of being soft and compressible, which it necessarily would be were it produced by matter, it becomes daily harder, till it arrives at a certain magnitude, when it gradually becomes softer again, but without any fluctuation of matter being perceived in it.

There is reason to imagine, that in most instances the testes become affected by the inflammation spreading from the urethra along the vasa deferentia. This has been doubted by some, but without any good reason being assigned for it, nor has any other mode of accounting for it been suggested. We see that by the vasa deferentia a direct communication takes place between the urethra and testes, and the first appearance of a swelled testicle commences in the epididymis, formed as it were by the termination of this very line of communication. In a great proportion of cases too, the patient is sensible of a pain stretching from the swelled testicle along the groin, which we know to be the direct course of the vas deferens.

A variety of other causes might be mentioned, which tend to excite inflammation in the testes in a similar manner with Gonorrhœa: among these are, the irritation produced by a stone in the neck of the bladder; by the irritation on the introduction of a catheter or bougies;

and the inflammation which takes place in these parts after the operation of lithotomy. A swelling of one or both testes is not an unfrequent occurrence from all of these, particularly from the latter, and from the use of bougies, especially when they are not properly introduced; and we see no manner in which it can be so readily produced as by the irritation excited about the neck of the bladder, carried along the vasa deferentia.

The consequences of swelling of the testes, which we have most to dread are, a hardened state of the parts chiefly of the epididymis, which, even when one, but more certainly when both testes are swelled, is apt to be followed by impotency; and a morbid irritability, which is sometimes so great as to prevent the patient for a considerable time from using any kind of exercise, and from following the ordinary occupations of life, without hazarding a return of the swelling of the testes. Suppuration in the body of the testis, from the inflammation induced by Gonorrhœa, is hardly an object of regard, for it does not take place in one of five hundred cases.

But the two circumstances I have mentioned of a permanent hardness in the epididymis, and that distressful irritable state of the testes itself, which are apt to succeed to this disease, are objects of the first importance, and require an immediate application of every remedy that can probably tend to prevent them. Scarcely any occurrence can prove more troublesome or inconvenient than swellings of the testis; and an enlarged state of the epididymis, when it takes place in any considerable degree, has, in many instances, as I have already observed, the effect of inducing impotency. To a certain degree, a swelling of the epididymis often continues for a great length of time; in some instances, during the life of the patient, without any bad consequence taking place, particularly when one testicle only is affected. But I have known so many instances of the contrary, and of such distressful effects ensuing from it, as makes me with confidence say, that nothing should be omitted that can or might probably tend to prevent or remove it.

As we find that all the symptoms of this disease, as well as the consequences which ensue from it, are usually severe in proportion to the degree of inflammation which takes place, it ought to be our view, in every instance, to prevent this from arriving at any great height. This is most effectually done by blood-letting; a proper use of laxatives; opiates; the application of anodynes and astringents to the parts affected; preserving the body in a proper posture, and suspending the testicle.

Of all these remedies blood-letting is the most effectual and certain, particularly local blood-letting by the application of leeches. In plethoric patients, or where the swelling arrives at any considerable bulk, blood should be taken from the arm in such quantities as the strength will permit, while, at the same time, a number of leeches should be applied over the testis. But in weakly people, particularly where none of the symptoms are violent, the abstraction of blood by means of leeches alone will commonly prove sufficient.

The first application of leeches to a swelled testicle excites a good deal of uneasiness. They increase the irritability of the parts, and an increase of the tumour seems to be induced by them; but the discharge has seldom continued for the space of an hour or two till the pain abates, the tension, which before was considerable, becomes much less distressful, and the swelling even appears to lessen in bulk, and in the course of the following day the patient can allow the parts which he could not previously bear to be touched, to be handled with freedom.

For the most part one application of leeches, if a proper number has been used, proves sufficient; but when any of the symptoms still continue severe, particularly when the swelling does not diminish, when the pain does not lessen, and when the febrile symptoms do not abate, it becomes in some cases necessary to repeat the application of leeches once and again. I think it here proper to remark, that we should never hesitate in this situation to take blood with freedom. A constitution must be delicate indeed that will be injur-

ed even with repeated applications of leeches ; and I am satisfied that very important advantages may be derived in all cases of swelled testes from a timely and proper use of them.

Abstraction of blood by means of leeches is not only useful in shortening the duration of the inflammatory symptoms, but, in consequence of this, it proves serviceable in preventing two very distressful consequences, which swelling of the testes is very apt to induce, viz. that swelled, indurated state of the epididymis which I have mentioned, and the most frequent variety of hydrocele, formed by serum collected in the tunica vaginalis. We have already had occasion to remark, that a permanent swelling of the epididymis is a very frequent effect of an inflamed testicle, and I have met with several well-marked instances of hydrocele proceeding from the same cause. That blood-letting in any way, whether general or local, will at all times prevent the accession of these symptoms, I will not pretend to assert ; but, from the result of much observation, I am convinced that it answers this purpose with more certainty than any other remedy that has yet been employed.

In many situations leeches cannot be procured ; when this happens to be the case, nearly the same advantage may be derived from small punctures being made on different parts of the swelling. The punctures should be made with the point of a lancet, and if the scrotum be previously immersed in warm water, nearly the same quantity of blood will be obtained from them as from the same number of leeches.

As swelling of the testicle in Gonorrhœa seems in every instance to proceed from the irritation excited in the urethra, it is an object of the first importance to remove every cause that can in any degree tend to irritate either the urethra or contiguous parts. Hence, where costiveness prevails, gentle laxatives prove particularly useful. I have known different instances of hardened fœces collected in the rectum inducing swellings of the testes ; and nothing tends more certainly than

this to keep up the disease, by whatever cause it may at first have been induced. But although costiveness is to be guarded against, we are, for a similar reason, to shun the opposite extreme. Strong purgatives always excite much irritation in the rectum, and are therefore to be carefully avoided in Gonorrhœa. It must consist with the knowledge of every practitioner that they universally do harm. Where the bowels are moderately easy, no medicines for this purpose can be required, but when they are not in this situation, castor oil, flowers of sulphur, cream of tartar, or any other gentle laxative, should be employed. Even these should be given in small doses, repeated at proper intervals, rather than that any risk should be incurred of exciting irritation in the rectum by their being exhibited in larger quantities.

With a view to lessen and remove the irritation and pain in the tumour with as much certainty and expedition as possible, opiates should be prescribed immediately on the pain becoming severe. When they can be avoided till one or more easy stools have been procured, they prove most useful; but when much irritation prevails, no regard should be paid to this. As the sickness and general uneasiness which sometimes occur from a swelled testis are evidently the effect of irritation, nothing proves so effectual in removing these symptoms as adequate doses of opiates; and at the same time that they remove this distress of the system by lessening the pain, they also tend to carry off the swelling of the testicle. From an idea that opiates tend to increase the heat and other symptoms of fever, many practitioners are afraid of using them wherever fever takes place in any considerable degree; but much experience of their influence enables me to say, that they may be employed with much safety and advantage in every stage of swelled testis where the degree of pain is considerable.

This is so remarkably the case, that I have known instances of the hernia humoralis, as it is termed, being cured by opiates alone, which did not yield to the usual remedies. In whatever manner Gonorrhœa may act in

exciting swelling of the testis, the tumour, when once produced, excites so much irritation, that, till this be lessened, the swelling for the most part continues obstinate. Next to blood-letting, opiates prove the most effectual remedy for this purpose.

While the internal exhibition of opiates thus proves useful, advantage is often derived from applying them to the swelling itself. This may be either by the application of soft pledgits, soaked in laudanum, or anodyne balsam, or by poultices made with a strong decoction of poppy heads and crumb of bread.

All the saturine applications prove useful here. When Goulard's extract, as it is termed, is employed, or what is nearly the same, the acetum lythargyrites, it ought to be in greater quantities than are used in other parts of the body; for the testes being protected by different coverings, remedies of this kind, when of the ordinary strength, do not readily affect them. When saccharum saturni is employed, as it will not dissolve in sufficient quantity in water, if vinegar be not added, and as vinegar proves an useful application, even by itself, these two remedies ought always to be combined.

The steams of warm vinegar act as an useful discutient here. In applying them, the testes should be properly suspended over a vessel in which boiling vinegar is contained; or the swelling may be fomented from time to time with flannel immersed in warm vinegar, and so strongly wrung, that nothing but steam remains upon it. Vinegar, in every form, acts with much advantage in this disease, and this gives a pleasant variety in the way of applying it.

Whatever remedy is employed, the body should be kept as much as possible in a horizontal posture, at the same time that the scrotum should be properly suspended. We find by experience that no remedy will prove effectual while the patient continues to walk about; while, in many instances, a horizontal posture of itself, will have a considerable effect in removing the disease. In suspending the scrotum, care should be taken to do it in such a manner that the testicle be completely sup-

ported without being compressed. Pressure, even in a slight degree, always does harm, and ought to be avoided.

We have already had occasion to observe, that in Gonorrhœa a stoppage of the discharge often takes place on the first approach of a swelled testis. This leads to the idea of some advantage being to be derived from our exciting a return of the running; and there is not a doubt of this proving in some instances useful. The discharge from the urethra not only lessens the inflammation in the part from whence it proceeds, but it has also an influence on the tumour of the testis. As it is now universally admitted that a return of the running does not act by drawing matter directly from the testis, some have suspected that it never can prove useful. But why may not a discharge excited in the urethra act in a similar manner in removing an inflammation of the testis, that we know from daily experience happens with fetons and other issues in the treatment of inflammatory affections of other parts? The fact indeed, is, that a plentiful return of the discharge very commonly relieves all the symptoms of this disease.

For the purpose of exciting a return of the running, bougies prove most effectual; but in affections of the testes they require to be managed with a delicacy not usually observed in this branch of practice: for if more pain or irritation be produced than is necessary for the purpose, instead of acting as a remedy, they necessarily aggravate every symptom. In common practice, I think it better to trust to the frequent application of warm emollients; such as the immersion of the penis in warm milk, or in decoction of althea, or lintseed; applying warm poultices over the penis, and injecting warm oil or milk into the urethra.

From the instantaneous manner in which swellings of the testes sometimes succeed to a stoppage of the discharge in Gonorrhœa, and from their appearing, we are told in some instances, even to precede this stoppage of the running, some have doubted whether they are to be considered as the cause or effect\*. That the testes may

\* Vide John Hunter, on the Venereal Disease.

first inflame and the running afterward stop, cannot be doubted. But although this may happen in a few instances, the very reverse is what we commonly meet with, inasmuch that patients who have once been affected with swellings of the testes, are very apt to experience a return of the disease in every Gonorrhœa to which they may in future be liable, solely from the running being carried off in the usual way. I know several, who, for this reason, dare not use even the mildest astringent injection; otherwise they are sure to have a swelling of the testis induced: while, in others, it swells at the termination of the running, whether injections have been used or not. In the course of my observation, therefore, no cause for doubt has occurred upon this subject.

By a proper application of the different remedies we have mentioned, swellings of the testes are for the most part soon relieved, and at last carried off entirely excepting that permanent hardness to which the epididymis, as we have seen, is particularly liable. But although this is the common event of the disease, yet instances are not wanting, most frequently indeed from the patient's misconduct, of the whole body of the testis remaining swelled, and obstinately resisting all those remedies which usually prove effectual. If, in this situation, some application be not made, by which the size of the tumour is soon diminished, and if it be allowed to remain stationary for any length of time, it is very apt to continue much enlarged, and sometimes of a schirrous hardness during the life of the patient. I may also remark, that it is this state of the disease which is most apt to terminate in hydrocele; or effusion of serum into the tunica vaginalis testis, with which it is sometimes attended.

In this situation mercury is commonly employed; and, in some instances when given slowly, as an alterative, I have seen it prove useful; but it is doubtful whether a complete course of mercury should ever be advised or not, for when it does not carry off the swelling, which seldom happens, it is apt to increase it, and to induce pain and irritation in the tumour when none existed in it be-

fore. Whenever mercury, therefore, is advised, it ought to be in such quantities as cannot tend to quicken the circulation or excite fever. A decoction of mezereon has in some instances been given with advantage along with mercury\*.

It is in this state of a swelled testis, where the tumour does not yield, but remains nearly of the same size after the inflammation by which it was induced is gone, that emetics are most likely to prove useful. They have been used, I know, in all periods of the disease; but it is chiefly in the situation we are now speaking of that I have seen them act with advantage. A smart emetic, carried a proper length, will sometimes, in the space of an hour or two, lessen the bulk of a tumour which had for several weeks obstinately resisted every other remedy. In some cases one emetic proves sufficient, while, in others, it requires to be repeated once and again. Mercurials were formerly used for this purpose. This was done from the disease being considered as a symptom of Lues Venerea, and for which mercury was known to be the only antidote. But we now know that tumours of the testes, which take place merely from Gonorrhœa, never partake of the Venereal Virus; and accordingly emetics, of whatever nature they may be, prove equally useful here with mercurials, provided the shock which they give to the system is equally considerable.

I have sometimes, in this state of a swelled testicle, applied a blister with advantage. It might not perhaps be altogether safe to apply blisters while the scrotum continues much inflamed; but when the external inflammation and tension subside, they may be advised with safety; and, in different instances, I have known them accomplish a reduction of the swelling of the testis, where other remedies had for some time been employed without any effect.

A due perseverance in the use of some or all of these remedies will seldom fail where a swelling of the testicle is altogether inflammatory; but where it proceeds in a

\* Vide Appendix, No 45.

great measure from irritability, as we judge to be the case where the swelling comes and disappears suddenly, or where it comes and goes from one testicle to another, other remedies are, in this situation, found to prove more effectual.

Even in this variety of the disease, blisters sometimes prove useful; and I have known the irritation removed, and the swelling carried off in the course of a short time by opiates; but these afford only a temporary relief, and do not prevent the disease from returning on the slightest application of any of the exciting causes which usually tend to induce it.

The remedies which here prove most effectual are cold bathing, and a plentiful use of bark. Sea bathing, when the season permits, should in the first place, be advised, but when this cannot be obtained, cold water may be used at home, with a proportion of common salt dissolved in it. It answers a good purpose whether the whole body be immersed in it, or merely the scrotum bathed in it, but for the most part, I have thought that it proves most effectual when applied to the scrotum only. As bark and cold bathing act upon the same principle, that is, by giving tone and vigour to parts which we suppose to have been deprived of them, they may either be used together, or exhibited separately, as the patient may incline.

The testes, we find, are apt to decay. One of them will begin to lessen in bulk, and, in a gradual manner, will disappear entirely, or leave only a thin membranous substance in its place. Generally the other remains sound; but I have known instances of both becoming affected at the same time, and others where the one remained entire as long as any part of that which was first affected was perceptible, but where it also began to decay as soon as the other was entirely destroyed.

This affection occurs at all periods of life, but most frequently after the 40th year. In many instances, no cause whatever can be assigned for it; but I have observed that it is most frequent in people of delicate constitutions, where the muscles are soft and relaxed, and the complexion wan and fallow. I have also found that

those in whom it occurs, have, in almost every instance, been in early life particularly addicted to Onanism.

In a few cases it has appeared as an evident consequence of a swelled testicle. On the fullness produced by the disease being removed, the process of absorption by which this was accomplished does not stop, but goes on till the whole testis is carried off. In some instances this takes place while the testicle continues to the last of its natural degree of firmness, or even while the hardness still prevails which occurred during the state of inflammation by which the swelling was at first induced: but, in others, before this wasting process commences, the testicle becomes soft and pulpy, or even dissolves into a fluid. It is seldom attended with pain, the patient being, in many instances, ignorant of his loss till one, or perhaps both, testes are nearly consumed.

Hitherto no certain remedy has been discovered for putting a stop to this complaint. Mercury, hemlock, and electricity have been tried, but with no advantage. The cold bath has for a time seemed to prove useful, but the disease returned again, and both testes were dissolved. In one case, where one of the testes was consumed before the patient perceived it, and where the other was evidently affected, I applied a blister over it. This wasting process stopped, and never recurred again. The patient is about 36 years of age. His inclination and powers of propagation, he says, are still as strong as they were before, and he has lately had a child.

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## S E C T. VII.

### *Of Swellings of the Spermatic Cord.*

THE Spermatic Cord is liable to swellings of different kinds, but it is such only as proceed from Gonorrhœa that we are here to notice.

It sometimes happens that inflammation of the testicle spreads to the cord, and excites pain and tumefaction

along the whole course of it. At other times the cord inflames without any previous affection of the testis; it becomes tense, hard, and painful. The swelling, for the most part, is at first confined to the vas deferens, but at last the other parts of the cord suffer also.

I have met with some in which one or two tumified parts were perceived in the course of the cord, while the rest of it remained sound; but, in general, the cord is equally affected, from the testis along its whole course up the groin.

On the first approach of this disease, as it is always accompanied with pain and tension, with some inability to walk, the patient is induced to treat it with attention; but, where the swelling is not soon carried off, the pain will sometimes abate, or even vanish altogether; and in this state, where the tumour is not considerable, the patient is led to suppose that no harm can arise from it; by this neglect the swelling is often rendered so firm and hard that no remedies we can employ have any influence in removing it. In some cases I have met with a hard ring, affecting the cord only at a particular spot, where the diseased part was nearly as firm as bone, while the rest of it was in a soft natural state.

While the tumour is confined to one part of the cord I have seldom known it increase to any alarming degree, but whether it be circumscribed, or extended over the whole length of the cord, no time should be lost in the application of remedies for removing it. Independent of other reasons, if the vas deferens be chiefly affected or even only compressed in its course, the testicle will be rendered as certainly useless as if it were extirpated: even this, in some instances, where one side only was affected, has appeared to render the patient impotent, and it will never fail to do so where the disease affects both sides.

The remedies that prove most effectual here are blood-letting, blisters, and such others as are usually employed with advantage in swellings of the testis. These we need not particularly enumerate, as they were fully treated of in the last section; but it may be proper to remark that

blood-letting proves chiefly useful on the first approach of the disease, and in this state, when properly applied, that it seldom fails in removing it. It may, in some cases, be necessary to take blood from the arm, but the local discharge of it by leeches applied to the part affected, is at all times to be more depended on.

Where the discharge of blood, however, does not soon lessen the size and hardness of the tumour, we need not afterwards expect any advantage from it. In this case I have repeatedly known blisters prove useful when applied along the course of the cord; but neither are they to be depended on if some effect be not soon perceived to result from them.

In partial affections of the cord a small blister applied to the diseased part, and the part kept open with ointment of cantharides, has tended to reduce the swelling.

Mercury is commonly employed here, and where the disease does not soon yield to blood-letting and blisters, it is perhaps the only remedy from which any advantage is to be expected; but I have commonly found, where the swelling has been carried entirely off by mercury, that there has been much cause to imagine that the patient at the same time laboured under Lues Venerea. In some cases, the disease has subsisted in an evident form of pox in other parts of the body, while, in others, there was only grounds for suspicion. In all of these the mercury seemed to operate with more certainty when a decoction of mezereon and sarsaparilla was conjoined with it.

Mercurial frictions prove more useful here than any other mode of giving the remedy, and the application of mercurial plasters to the swelled parts acts with more advantage in swellings of this kind than in any other in which I have employed them.

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## S E C T. VIII.

### *Of Swellings of the Lymphatic Vessels of the Penis.*

WE know, from the history of the Lymphatics, that they serve to inhale, and to carry into the general course of

the circulation, not merely from the surface of the body, but from every other part of it, fluids applied to their open extremities. In this manner they remove from some parts what might prove hurtful if allowed to remain, and they carry into the constitution from others what is obviously meant for the nourishment and support of it. But while this is their chief purpose, we also know that they carry into the system what often tends to destroy it. They seem to have no power of rejecting what proves hurtful, hence they imbibe poisons, and the most inoffensive articles, with equal readiness. All our contagious diseases are probably produced through the medium of the lymphatics, and we can prove by experiment that this is the case with many of them; particularly with the plague, the small-pox, and Lues Venerea. So readily is the matter of these diseases absorbed by the lymphatics, that it can never with safety be applied to any part of the body; for so quickly does absorption, in some instances take place, that we have frequent proofs of infection being carried into the constitution, even after much pains has been taken to wash away the matter by which it was produced, in the space of a minute or two after being applied to the surface of the body.

For the most part we find that the lymphatics themselves do not immediately suffer by the absorption even of the most noxious matter. They will convey the poison of a viper and other serpents to the course of the circulation, by which the animal will be killed in the space of an hour, while no vestige of its effects appears in the lymphatic vessels themselves. In like manner, the matter of Lues Venerea passes into the constitution from the penis, without any swelling or other mark of disease being perceived in the lymphatics through which it was conveyed.

This, we must allow, however, is not universally the case. Instances sometimes happen of the matter of Lues Venerea passing through lymphatics that are hard and swelled, but we know from daily observation that it is not a frequent occurrence. We find, indeed, that the lymphatic vessels in every part of the body are apt to

swell and inflame on causes capable of exciting irritation being applied to them. Thus we often observe the lymphatics of the arm swell, become hard and painful from a prick in one of the fingers with a pin or a thorn, or even from a nail being cut too far in the flesh; and in Gonorrhœa it is by no means uncommon to find a hard lymphatic passing along the back of the penis, to the groin, arising in some instances from the prepuce and in others from the urethra. But although this, as we have observed, occurs also in some cases of Chancre, we meet with at least twenty instances of the contrary, for one in which this affection of the lymphatics takes place. I think, too, that I have observed, where the lymphatics proceeding from Chancres have inflamed, particularly where the inflammation has been considerable, that the constitution has not been so apt to suffer as where this did not happen. From all which, I would conclude, that inflammation of the lymphatics, when in a high degree, instead of indicating an increased power of absorbing what is applied to them, as many have imagined, tends in a great measure to lessen, and, perhaps to destroy it. Till the fact is farther ascertained, which experience and observation alone can do, it would be improper to place any dependence upon this in the treatment of Chancres. In all cases of Chancre, whether the lymphatics inflame or not, it would be imprudent to omit whatever might tend to render the constitution safe; but finding that much inflammation seems not only to lessen the power of absorption in the lymphatics, but that they inflame from causes in which we know that no infection exists, as often happens from a prick or a cut with a clean instrument, we would from this alone be led to think that this affection of these vessels which occurs in Gonorrhœa, proceeds more from irritation than from any other cause. This idea, however, is farther confirmed by the proofs we have already adduced of Gonorrhœa being a local disorder, as well as by our daily observation of the rise and progress of these swellings which occur in this disease. They commence with all the usual symptoms of inflammation. A hard string, or cord, is perceived along

the back of the penis. It is painful to the touch, and the teguments above it sometimes acquire an erysipelatous redness. The whole penis becomes stiff and uneasy, and this renders erections particularly painful.

In a great proportion of cases the inflammation subsides quickly and easily, the stiffness and pain gradually abate, and the hardness of the lymphatic disappears entirely: but where the inflammation has either been severe from the first, or not properly treated, it proceeds in some cases to suppuration, forming one or more small abscesses in the course of the affected part. The sores, however, which ensue from these, heal readily, when the constitution is otherwise healthy, forming a very manifest difference between *Gonorrhœa* and *Lues Venerea*. Similar affections of the lymphatics which occur in the latter; requiring, for the most part, a course of mercury to remove them. I say for the most part only, from having met with more than one instance, of the sores which occur in *Lues Venerea* from this cause, healing without the use of mercury; and which has induced me to think, that even in this disease, the lymphatics may swell and inflame, merely from the acrimony of the matter, and that this inflammation may have some tendency, as I have observed above, to prevent the matter from passing into the constitution.

Where swellings of this kind in *Gonorrhœa* are confined to the lymphatic vessels, I have commonly found that cold poultices, prepared with crumbs of bread, and acetum lythargirites, or saccharum saturni, prove more effectual than any other application. They remove the swelling and hardness, and lessen the pain with more certainty, than warm emollient poultices. But where the inflammation spreads over the penis, as it sometimes does, it becomes necessary, not only to discharge blood from the arm, but to apply leeches over the pained parts. This, with a low diet, and confining the patient to a horizontal posture, very seldom fails in removing the disease. But it sometimes happens, either from the neighbouring parts becoming severely inflamed, or from the diseased lymphatic bursting, that effusions occur in the

contiguous cellular substance, and small abscesses forming, they at last discharge their contents, and produce such sores as I have already had occasion to mention.

The treatment of these should be the same as that of sores proceeding from any other cause in which the constitution is not affected. When their edges are hard and indamed, emollient poultices will prove useful. For the removal of sloughs and foulness, red precipitate, or even caustic, may be necessary; and for cicatrising them, nothing answers better than unguentum e calce zinci, or ceratum e lapide calaminaire\*.

In two different instances of hardened lymphatics in Gonorrhœa, besides the firm cord on the back of the penis, a thin, flat, hard tumour, proceeding from this cord, spread round the whole substance of the penis, for the breadth of a quarter of an inch. One of them was contiguous to, and immediately behind the glans. The other was near to the pubes. This last passed round the urethra, which it grasped so firmly, as to give cause to suspect, that at last it might prove a total obstruction to the urine. A course of mercury was tried in each of them, without any advantage. A small piece of mercurial plaster was then applied over the swelling, and this, with a gentle purgative of sea-water every second or third morning, was all that was advised. The swelling in each of them became considerably less, but never disappeared entirely. It did not, however, give any disturbance afterwards.

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## S E C T. IX.

### *Of Swellings of the Glands in the Groin.*

THE swelling and inflammation of the lymphatics, described in the last section, frequently proceeds no farther than the root of the penis. At other times it goes

\* Vide Appendix, No. xlvii. xlviii.

the length of the groin, and affects one or more of the contiguous glands, which become hard, swelled, and inflamed, putting on many of the appearances of the venereal bubo.

At other times these glands swell and inflame, where no affection of the contiguous lymphatics is perceptible. But although in such cases, no apparent inflammation occurs in these vessels, there is, however, much cause to imagine, that in a certain degree it always takes place. There is not, at least, any other obvious route by which the inflammation can be conveyed from the urethra to the glands in the groin.

In some cases these swellings become large, and, notwithstanding our endeavours to prevent it, suppuration at last takes place: but, for the most part, if they be not neglected at first, they may be very easily dissolved. In most instances, this may be accomplished by the use of saturnine poultices alone; but where the pain and inflammation are severe, blood-letting, both general and local, becomes necessary. Laxatives always prove useful, and a cooling, low regimen can seldom be dispensed with.

The most perplexing part of the surgeon's practice here is, to determine the real nature of the tumour; to ascertain whether it proceeds merely from inflammation, or from the absorption of venereal matter. If from the last, mercury alone will prove effectual; while no practitioner would consider mercury as necessary, for the removal of a swelling altogether inflammatory. Neither would it, in this case, answer any good purpose. It would not lessen the size of the swelling: nay, by the fever which it sometimes excites, it might even tend to increase it, and disappointment to the practitioner, and much distress to the patient, might be the consequence.

The circumstances upon which we chiefly form our judgment here, are these: if no chancre or excoriation has been perceived, either upon the glans or prepuce, and if the inflammation in Gonorrhœa has been considerable, there will be cause to imagine that the tumour is not venereal. When treating of chancre and venereal

bubo, we shall enter more fully into the consideration of this; but at present, I may observe, that buboes do not commonly occur, without chancres going before them. I know, indeed, from various cases which have fallen under my management, that, contrary to the general opinion, real venereal buboes sometimes form without any previous chancre, or any external affection; but as it does not happen once in a hundred instances, we are sufficiently warranted in considering the absence of chancre, as a reason for supposing that swellings of this kind are not venereal.

In such swellings as occur from *Gonorrhœa*, much pain and tension prevail, not merely in the diseased glands, but over all the groin; and a general sympathetic uneasiness spreads over the thighs, and under part of the abdomen. Even the testes and abdominal viscera sometimes suffer, whereas, in the venereal bubo, it is commonly one gland only that is affected, and the contiguous parts seldom become uneasy till the disease is far advanced; not, indeed, till the tumour has acquired such a size, as to excite pain solely by distention. The swelled gland, it is true, is painful from the first, and the pain becomes gradually more severe as the tumour increases; but the pain is chiefly confined to one part, and seldom spreads farther till the teguments are much stretched by the subsequent formation of matter. And, lastly, when glands swelled from this cause burst, the sores which ensue have a very different appearance from those produced by real venereal buboes. Their edges, instead of being hard and retorted, have more the appearance of sores which occur from common abscesses, and they soon begin to heal, even when mercury is not employed, which the others, we may observe, seldom do.

This circumstance of these sores healing, whether mercury be used or not, is the most decisive characteristic of their true nature, and when any doubts of this are entertained, either from the swelling having taken place without a previous chancre, or from any other cause, we ought to delay the exhibition of mercury till their

tendency to heal, or to degenerate into a worse state, be ascertained.

If they put on a healing appearance, and gradually become less, there will be much cause to hope that a complete cure will be obtained, whether mercury be used or not ; while, on the contrary, this remedy should be immediately advised when the sores become foul, and their edges hard ; and particularly when, instead of healing, they extend to a greater size.

The progress of the swelling also affords a mark of discrimination. The venereal bubo proceeds more slowly to suppuration than the inflammatory swelling of which we now speak, which most frequently, indeed, is easily discussed, and seldom arrives therefore at the state of abscess ; but when tumours of this description do suppurate, it commonly happens in the space of a few days. I have known matter completely formed in them in three or four days from their first appearance ; a circumstance which perhaps never happens in glandular swellings produced by the matter of Lues Venerea.

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## S E C T. X

### *Of Excoriations of the Glands and Prepuce.*

BY the acrimony of the matter in Gonorrhœa the Glans and Prepuce are sometimes excoriated. A slight degree of inflammation takes place at first, either partially, or over the whole parts ; and this being succeeded by a discharge of matter, the skin at last becomes fretted, and on being examined with a glass, the matter is perceived to flow from an infinite number of small points, on the smallest pressure being applied to them.

But, for the most part, this affection of the prepuce and glans takes place without any discharge from the urethra. In the course of a few days after connexion with an infected woman, and without any symptom of Gonorrhœa, a sensation of heat is perceived over the

whole prepuce and glans, which soon terminates in a discharge of matter very similar to what comes from the urethra in Gonorrhœa. From this circumstance, the disease has been termed Gonorrhœa Spuria. The matter indeed, is so similar to that of Gonorrhœa, that it is usually sometime before the patient can be convinced of its not coming from the urethra. It not only resembles the matter of Gonorrhœa in colour and consistence, but likewise in quantity. In some cases, it is surprisingly great, owing to the great extent of inflamed surface, in the numerous plies and doublings of the skin forming the prepuce.

In slight affections of this kind, the prepuce continues to move upon the glans as it does in health; but when the matter is either of itself particularly acrid, or allowed by want of attention to remain till it becomes so, the skin forming the prepuce becomes so much inflamed and swelled, that it cannot but with much difficulty be made to pass backward and forward. In some cases this becomes impossible. If this happens when the prepuce covers the glans and cannot be drawn back, a disease is thereby produced, which we term phymosis; and when the swelling takes place when the prepuce is retracted and cannot be pulled over the glans, the disease is termed paraphymosis. Of these affections we shall speak more particularly in the ensuing sections.

By many, this discharge of matter from the prepuce and glans has been judged to be venereal; that is, they have supposed it to be produced by the matter of Lues Venerea. They therefore conceived it to be always connected with an affection of the constitution, and have accordingly, in the method of cure, been chiefly directed by this opinion,

This opinion, however, is evidently not well founded. From much observation, I am convinced, that this discharge is of a local nature, and that it is no more capable of affecting the constitution than the matter of Gonorrhœa. I believe indeed that this is now very generally admitted; and that it is those only who doubt

of it, who, taking their information from books, have not paid that attention to the event of those affections, which in forming a judgment of them is absolutely necessary. It will be universally found that the discharge may be more easily removed by remedies applied directly to the parts affected than by mercury, or any medicines, given internally. Indeed, no advantage is derived from the internal exhibition of medicines, while the disease seldom resists the application of an infringing wash : neither is the constitution ever affected with pox from excoriations proceeding merely from Gonorrhœa.

It is true that buboes and symptoms of pox sometimes occur where the prepuce and glans have been previously affected in this manner. Of this I have seen many instances : but in all of these it has happened, that on enquiry, the patients were found to have had connection with diseased women during the continuance of the excoriation ; and whatever may be the opinion of some individuals upon this point, I believe few will doubt of an ulcerated or excoriated surface being particularly favourable for promoting the absorption of any matter that is applied to it ; inasmuch, that it is the universal remark of patients, that they never escape being poxed, if in such circumstances they have connection with women that are infected.

It is worthy of remark, that a small, partial excoriation is always at first of a suspicious nature, while from any observation I have been able to make, every general affection of this nature, where the excoriation extends over the whole prepuce and glans, terminates easily without producing any constitutional taint. The disease sometimes at first, indeed, occupies a small spot, and afterwards extends gradually over the contiguous parts, and where, by the event, we judge of its being of the most innocent nature from no disease of the constitution being produced by it. But I have uniformly found, where a small part only has remained for some time a raw and excoriated, without extending to the surrounding parts, that symptoms of pox succeed to it with as much certainty as they ever do to chancres.

I therefore believe, that all partial affections of this kind, which remain for more than a day or two circumscribed, are produced by the matter of Lues Venerea, and that they ought accordingly to be treated as symptoms of that disease. Besides the other differences which we have elsewhere enumerated between the matter of Lues Venerea and Gonorrhœa Virulenta, it would appear that in this they differ in the most obvious manner. The matter of Lues Venerea, however dissoluble it may be when received into the system, from which indeed it is never expelled but with the assistance of mercury, is always slow in its progress while only locally applied either to the penis or any other part. Neither can it be applied, as we have already had occasion to remark, to the smallest point, without much risk of pox being produced by it : whereas, the matter of Gonorrhœa, whether it be applied to the urethra, to the glans, or prepuce, spreads quickly over all the contiguous parts ; while it is obvious to daily observation, either that it is not absorbed, or if it be taken into the system, that no constitutional disease ensues from it.

Excoriations of this kind not only resemble Gonorrhœa, in being produced by the same matter, and in being entirely local, but in the method of cure. We have already had occasion to see, that the discharge in Gonorrhœa cannot be certainly removed, but by the use of astringent injections. In like manner, bathing the parts affected in astringent solutions proves the most effectual practice here. Lime-water answers particularly well for this purpose : also solutions of saccharum saturni, and of white vitriol : immersing the parts in brandy, or in a strong infusion of red-rose leaves, will sometimes remove the discharge on the first application. It is proper, however, to remark, that the more frequently remedies of this kind are applied, the more effectual they prove. They should be used at least five or six times daily, and for the space of a few minutes at each application.

Emollient ointments are frequently employed in affections of this kind, but the very cause which renders

astringents useful makes every application of this nature improper. They constantly increase the discharge, while no advantage of any kind accrues from them.

Neither do we find that purgatives, or any of the cooling medicines usually prescribed here are of any real utility. When much inflammation takes place, they may, in some instances, prove useful, but in all such cases blood-letting is more to be depended on; particularly the application of leeches to the parts immediately affected, which, in all local inflammatory complaints, is to be considered as the most effectual remedy.

It has been objected to the application of leeches in excoriations of the penis, that the wounds from the bites of these animals are apt to degenerate into venereal sores. This proceeded upon the idea of all such affections being produced by the matter of Lues Venerea; but now when we know that this is by no means the case, it is obvious that the opinion must be ill founded; and from various and repeated trials of the remedy in question I can decidedly say that it is so.

But admitting that a case should occur, in which it might be doubtful whether the excoriation and swelling was truly venereal or not, still I would not hesitate in advising the application of leeches: they would prove more effectual than any other remedy in carrying off the inflammatory symptoms, while their bites, if they should put on the appearance of venereal sores, would immediately render the nature of the disease certain, which otherwise might long have remained in doubt.

In all sores and inflammatory affections of these parts, the posture of the body and position of the penis are circumstances requiring particular attention. The patient should be kept as much as possible in a horizontal posture; and the penis should be elevated so as to prevent the glans from hanging pendulous. It often happens indeed, where this is omitted that swellings remain obstinate for many weeks together, which otherwise might have been carried off in a few days.

## S E C T. XI.

*Of Excoriations in the Parts of Generation of Women.*

THE parts of Generation in Women are liable to excoriations of a similar nature with those enumerated in the last section. In some cases they are confined to the clitoris, nymphæ, and labia pudendi. In others they spread to the perineum, and even to the groins and thighs, where, from negligence, and want of attention to cleanliness, I have known deep and very extensive ulcers produced.

Where the excoriations are confined within the parts of generation, the symptoms are nearly such as occur from Gonorrhœa in the usual form of the disease; but where the inflammation and rawness spread to the thighs, a great deal of distress is experienced in walking, and in every motion of the body.

The method of cure is nearly the same in women as in men. Bathing the parts frequently with one or other of the astringent applications mentioned in the last section, for the most part, proves effectual; for the excoriated parts seldom lie so deep as to require the use of the syringe; but when the parts become evidently ulcerated, bathing alone is not sufficient. In this case the ulcers fall to be treated in the same manner with sores proceeding from any other cause. When they are foul and sloughy, an ointment strongly impregnated with mercur. precipit. rub. is perhaps the best application we can use; and for the purpose of healing them, nothing answers better than common cerate, with a large proportion of lapis calaminaris, or unguentum e calce zinci, for which prescriptions are given in the Appendix.

When sores of this description do not soon yield to these applications, and especially when they spread and become deeper while the patient is using them, there will be some cause to suspect that a venereal taint exists in the constitution: in which case a course of mercury should

immediately be advised being the only remedy upon which, in such circumstances, we can place any dependence.

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## S E C T. XII.

### *Of the Phymosis and Paraphymosis.*

IN section tenth we found it necessary to give a definition of these two diseases. Inflammation of the preputium always excites some degree of thickness and contraction. When the contraction occurs while the prepuce covers the glans, and in such a degree as to prevent it from being pulled back, the disease thus produced, is termed phymosis. We say that paraphymosis takes place when the prepuce contracts behind the glans, and cannot be drawn over it.

One of the most frequent causes of phymosis is chancres on the preputium. The thickening of the skin induced by chancres, and the inflammation with which they are apt to be attended, is often productive of phymosis; but it also occurs from other causes. Whatever excites much inflammation of the penis will induce it. Hence it readily occurs in every case of Gonorrhœa attended with any unusual degree of inflammation, particularly in the variety of the disease, where the glans and prepuce are inflamed and excoriated. But although these excoriations often terminate in phymosis, it is certain that they are more frequently productive of paraphymosis. The patient, in clearing away the matter necessarily draws back the preputium, and when the parts are previously much inflamed and thickened, they are apt to contract so suddenly when in this state of retraction, that they cannot again be drawn over the glans.

In the treatment of phymosis, we are often successful by a proper application of emollients. No effect will result from them when the stricture has been of long duration; but, unless the inflammation is unusually severe,

they will often answer if duly persevered from the first. Immerſing the penis, from time to time, in warm milk, or in a decoction of althea root, or of lintſeed, is perhaps, the moſt effectual method of applying remedies of this kind; and when much matter is produced between the prepuce and glans, either by chancres or inflammation, theſe liquids ſhould be injected from time to time with a ſyringe. But with a view to leſſen the diſcharge, after waſhing out any matter that may be formed, a weak ſaturnine ſolution ſhould be injected three or four times a day. This, with a low diet, abſtinance from exerciſe, and ſuſpending the penis, will, for the moſt part, prove ſucceſſful; but when the parts are much inflamed, it becomes neceſſary to take blood in quantities proportioned to the ſymptoms, not merely from the arm, but from the penis itſelf, by the application of leeches, which may always be done with ſafety where the diſeaſe is local, as we have ſhown to be the caſe where it proceeds from excoriation or from Gonorrhœa: but when it occurs from chancres, as venereal ſores are apt to enſue from the bites of leeches, it is better to omit them.

While any conſiderable degree of ſtriicture remains, it is always improper to force the prepuce back. This, however, is often done, but it very commonly terminates in paraphymosis; for when the parts are much contracted it is almoſt impoſſible to get the prepuce again brought over the glans, if it has once been forced completely behind it. It is better, therefore, to wait till the ſtriicture is intirely removed, before any attempt is made for this purpoſe. Beſides the riſk of inducing paraphymosis, the irritation which it gives, tends always to render the ſtriicture more obſtinate. When the inflammation is altogether gone, it may be proper, after immerſing the penis in any of the emollients above-mentioned, and rubbing it gently over with warm oil, to endeavour, from time to time, to ſtretch it to its uſual extent; but even at this period of the diſeaſe the prepuce ought never to be pushed back with ſuch force as can excite any kind of uneaſineſs.

In the treatment of phymosis it is proper to remark, that, in a great proportion of cases the stricture can never be altogether removed. In slight degrees of it we commonly succeed by the means I have mentioned, but whenever it is severe the parts remain under some degree of contraction, for the most part, during the life of the patient. We have it indeed in our power to remove even the most inveterate stricture that occurs, by laying the prepuce open, either by a partial incision, or cutting it from one end to the other, according to the extent of the disease, but this is a remedy of too severe a nature for the removal of phymosis, in the ordinary form of the disease. Where the prepuce is so much contracted as to interrupt the passage of urine, or to impede coition, it no doubt becomes proper to lessen or remove the stricture, but it is most frequently for obtaining ready access to concealed chancres that we advise this measure of laying the prepuce freely open.

Even chancres are often cured while the prepuce remains contracted; but this is only the slighter kinds of them. Whenever they are either deep or very extensive, although with much care and attention they may in some instances be cured, yet we are much more certain of effecting our purpose, and of doing it speedily, by laying the fores completely open. I am clearly of opinion, however, that a patient should rather submit to an ordinary or slight degree of phymosis, where there is no disease concealed by it, than incur the pain and distress which must always ensue from this operation. Many have it from their birth, and are not sensible of any inconvenience arising from it.

It happens, indeed, in some instances, even of this natural phymosis, if we may so term it, that we are under the necessity of removing the stricture by an incision. This is particularly the case where the exudation natural to these parts is in such quantities as to excite irritation, which it is always apt to do when it adheres to the prepuce and glans. By much pains in washing with a syringe, the parts may be kept so clean as to prevent them from suffering with this mucus; but in general we find

it necessary either to lay the contracted prepuce open from one end to the other, or remove a portion of it entirely, so as to perform the operation of circumcision.

It may be proper to observe, that although this operation of removing a portion of the prepuce is in itself exceedingly simple and easy, and never fails to answer the purpose where the parts are perfectly sound, that it is very apt to disappoint us entirely when they are under any degree of inflammation or irritation. In this situation, although the parts in which the stricture is seated be completely removed, the remaining extremity of the prepuce contracts almost immediately after the operation, so as to create nearly the same degree of inconveniency which it did before. By the introduction of doils of lint, sponge tent, and other such articles, we may for a time prevent the contraction from becoming considerable, but the irritation which these applications excite, at last oblige us to lay them aside, when the stricture soon takes place in a degree equal to what it was before the operation.

I have taken the more particular notice of this, from different cases having fallen under my management, in which, by endeavouring to remove a contraction of the prepuce by the operation of circumcision, we were completely disappointed. In three of these the operation was done by others. In one I performed it myself. But although every thing was done in all of them that might probably render them successful, yet they all failed, and after a considerable time spent in trying to dilate the newly-formed stricture, I was in two of these instances obliged to perform the operation for the phymosis in the usual way, by making a longitudinal cut through all the remaining part of the preputium. In one the stricture was not so considerable as to render it necessary, and in the other, the patient would not submit to it.

Were we to remove the prepuce entirely, by dissecting it completely away from that part of the penis where it begins to be formed by an elongation or production of the skin, the operation might probably answer our expectation, but it would leave the glans altogether un-

covered, which in those who have been accustomed to have it protected by the prepuce, is apt to excite very disagreeable sensations. Neither can I determine with certainty whether it would, in every case, answer the purpose of giving complete relief or not. Where the parts are previously in a state of irritation, the remaining skin might contract behind the glans, so as to produce some degree of paraphymosis; at least, in one of the four cases to which I allude, a very considerable portion of the prepuce was removed, and yet the remainder contracted in such a manner as to form a stricture which gave much distress.

Different methods have been proposed for performing the operation of a phymosis. For these the writers on surgical operations must be consulted, but the easiest, and perhaps the simplest of any, is that which I have described in the system of surgery\*, in which the incision is made by passing a sharp pointed bistoury along a directory between the prepuce and glans, and having pushed the point of the bistoury through the prepuce near to where it begins to form, the cut is completed by drawing the instrument forward; in which manner it is done, not only more neatly, but with more expedition, and with much more ease to the patient than in the usual way of cutting the prepuce from before backwards. In this manner the incision is always made at different strokes, by which the cut is apt to be ragged and unequal, whereas in the other it is done at once, and in any direction that the operator may incline.

Some advise the incision to run on the side of the penis, and others along the back of it. The difference in general is not material, but the former appears to me to be preferable, from the matter either of the cut itself, or of concealed chancres not being so apt to lodge between the prepuce and glans, as when the incision is made on the back of the penis. It is proper, however, to observe, that there are two circumstances, which in this operation, require particular attention: the large

veins of the penis should be avoided, and when chancres are present, the cut ought to run as near to them as with propriety it can be made, so as to admit of the easy application of proper dressings.

In the treatment of the parts after the operation, some attention is necessary to prevent the edges of the divided prepuce from adhering to the glans. I have known a good deal of inconvenience produced by this being overlooked, and it is easily prevented by inserting a small pledget of lint between the prepuce and glans at each dressing.

Paraphymosis may happen either from a stricture of the prepuce, from a swelled state of the glans penis, or from a combination of both.

When it appears to depend, either altogether or chiefly, on a contracted state of the preputium, the same applications should be made to it which we advised for the phymosis. By the use of warm emollients the stricture, when in a slight degree, may be so far removed, as to admit of the prepuce being drawn over it. After immersing the penis for a few minutes in warm milk, and rubbing the contracted parts with any emollient ointment, we may sometimes succeed by applying the fore and middle finger of each hand behind the contracted part of the prepuce, and pulling it gently forward, while, with the thumb of each hand placed upon the glans, we push it firmly backward. This I have done in different instances, which otherwise would soon have ended in strictures of the most confirmed kind. It must, however, be confessed, that it is only in the commencement of the disease that this, or any other manœuvre of a similar kind, will succeed; and there is no room for any such attempt when the disease proceeds from a tumefied state of the glans.

When the disease seems either to be entirely owing to an enlarged state of the glans, or partly to this and partly to a stricture of the prepuce, as sometimes happens, we may endeavour to relax the preputium by rubbing it with oil, or an emollient ointment; but in such circumstances it is evident that the application of emol-

lients to the glans would rather do harm. By relaxing the parts affected they would encrease the swelling. Cold astringent applications prove more useful, and ought alone to be depended on. In this view we advised cloths dipped in brandy, vinegar, and cold water, to be applied to the parts, and poultices, with crumb of bread, and a solution of saccharum saturni in vinegar and water. But when these do not soon succeed in reducing the swelling, we are under the necessity of removing the stricture by an operation, in order to prevent the accession of more serious symptoms. When too long neglected the glans is apt to mortify, by the contraction of the prepuce putting a stop to the circulation of the blood.

This operation consists in making one or more incisions into the contracted edge of the prepuce. We sometimes succeed by making two or three small cuts in different parts of the stricture with the shoulder of a lancet. They ought to be carried entirely through the skin, and into the cellular substance, and when they bleed freely they commonly give immediate relief; but it must be admitted that these small incisions, however numerous they may be, do not prove so certainly effectual as one free cut made completely through the stricture. The easiest method of doing this is, by insinuating the end of a director beneath the stricture, and cutting upon it with a scalpel. For this purpose a short directory should be used, with a groove open at the extremity.

The incision here does not require any particular attention. The divided vessels should be allowed to bleed freely. This generally lessens the pain, while it co-operates along with the removal of the stricture in carrying off the swelling. Lint, spread with unguentum saturnium, makes the best dressing for the sore.

It must be remembered that we are now supposing that no disease exists in the constitution. When either of these affections are conjoined with Lues Venerea, as we often find to be the case, the patient cannot be rendered safe, nor will the fores produced by the operation heal, without the assistance of a course of mercury.

## S E C T. XIII.

*Of Warts on the Glans and Prepuce, and Labia Pudendi.*

THE Glans, Prepuce, and Labia Pudendi, are frequently attacked with warty excrescences, on the termination of Gonorrhœa. They sometimes appear during the continuance of the discharge, but more commonly at the end of it, when the patient having considered the cure as complete, is surprized with the appearance of this new symptom.

They rise at first in the form of small points, which gradually become larger, and frequently so numerous as to cover a considerable part of the penis. In men they commonly begin immediately behind the glans, and extend, in the form of a ring, round the whole penis, near to the junction of the glans and prepuce. They afterwards appear indiscriminately on all the neighbouring parts, but they are usually more numerous upon the prepuce.

In some cases they are first perceived in the urethra. The patient complains of an obstruction to the flow of urine, and on separating the lips of the urethra, a red, florid excrescence is observed to be the cause of it. I have also met with productions of this kind in the urethra of women.

These warts are seldom painful; never, unless they proceed to a state of ulceration, which, when they do, is always to be considered as the fault of the patient. On their first appearance they are always firm and entire, but when they become numerous, if they be not regularly cleaned, the moisture natural to these parts becomes acrid, and renders them tender; and this, if it be not prevented by timely assistance, soon terminates in painful ulcers. Excrescences of this kind assume various forms. For the most part they are single, and pendulous, with narrow necks, but in some instances they have broad bases; while, in others, a number of these smaller warts sprout all from the same root, and form excrescences of une-

qual cauliflower surfaces. When long neglected, as sometimes happens with poor people, they acquire such a bulk as to cover the glans entirely; and when in this state they become ulcerated, the whole mass assumes such a diseased appearance, as with those not accustomed to this branch of business, gives a suspicion of their being cancerous. Of this I have met with different instances, where the penis, after being doomed to amputation, has been saved, and the warty excrescences removed.

It is difficult, perhaps impossible, to ascertain the cause of these warts. In some cases they are obviously produced from the cuticle, their attachment being so slight, that on being removed, the cutis vera is left entire: in others they proceed from the skin itself, but I never observed them to go deeper than this.

Whatever tends to excite the flow of an unusual quantity of blood to the penis, seems to create a disposition in these parts to formations of this kind: hence they succeed to various kinds of irritation. We know that they are a frequent consequence of the venereal irritation, for they often succeed to chancres; and I have known them in different instances succeed to simple excoriation, where neither Gonorrhœa nor Lues Venerea ever existed. By whatever cause irritation is produced in the prepuce and glans, it seems to excite a disposition in the small blood vessels of the parts to sprout or pullulate, by which these warty productions appear to be formed.

As warts on the genitals are a frequent consequence of chancres, they have been always considered as of a venereal nature, whether they are the immediate effects of chancre, Gonorrhœa, or any other cause. This opinion, however, is by no means well founded. Warts on these parts may, no doubt occur, while Lues Venerea exists in the constitution; and in such instances mercury must be given before a permanent cure can be expected. But in a great proportion of cases, at least ninety-nine of a hundred, they appear to be entirely local, inasmuch that remedies acting only upon the constitution have no influence whatever in removing them, while

they are for the most part, easily carried off by a variety of applications, which act solely upon the excrescences themselves, or rather upon the vessels by which they are produced. Nay, they are so evidently of a local nature, that when they occur in Lues Venerea, although they are very apt to return when removed while the inflammation exists in the constitution, yet it is very certain that this disease of the habit may be completely eradicated without any effect being produced upon them. The warts which succeed to chancres commonly remain equally firm and obstinate after mercury has been given as they were before, and are to be removed by the same means as if the constitution had never been affected. This, I may observe, is a point which in a particular manner merits the attention of practitioners; I mean of such as are not daily versant in this branch of business; for while the opinion is retained, as is still the case with some, of warts on these parts being in most instances connected with Lues Venerea, much mischief is apt to be done by a great deal of mercury being given where no advantage can even be derived from it. In the treatment of this affection I have known the constitution almost ruined by one course of mercury after another, without any effect upon the warts, and which were afterwards easily and speedily removed by remedies applied directly to the parts themselves.

I have mentioned irritation as a cause of these excrescences, but it is only the slighter kinds of it that seems to produce them. They often succeed to a slight degree of inflammation, but I have never known them form on parts highly inflamed: on the contrary, much inflammation seems to destroy the tendency in these parts to the production of warts, inasmuch, that our most effectual remedies in the cure of these excrescences, and for the preventing a return of them, are such as always excite a good deal of pain and inflammation. They may no doubt be removed more quickly with a scalpel or scissars, by tying ligatures of waxed silk round them, when they are pendulous, and have narrow necks, but they are more apt to return when removed in this man-

ner, or even when they are destroyed with caustic, unless some degree of inflammation has at the same time been induced upon the parts. Besides, ligatures cannot be applied to warts with a broad base, which they frequently have; and few patients will submit to the use of the scalpel for the extirpation of the numerous warts, which in such instances for the most part prevail.

Inflammation for the purpose of removing warts might be excited in various ways; but we necessarily prefer that which is the easiest to the patient, and which at the same time proves effectual. We sometimes succeed by bathing the warts and contiguous parts three or four times a day with a strong solution of curde sal ammoniac, or of corrosive sublimate. And a solution of mercury in the spirit of nitre at the same time that it acts upon the warts themselves as a caustic, seems also, by exciting inflammation in the vessels of the contiguous parts, to remove or destroy the disposition which first produced them. Prescriptions are given for these solutions in the Appendix, Nos. 39, 40, and 41. The two former may be used with freedom, but the strength of the latter renders it necessary to apply it with much delicacy and attention. The parts should be merely moistened with a pencil dipped in it, nor should this be repeated above once every second or third day.

Tincture of cantharides, applied in this manner, sometimes answers; but we find by experience, that our success is more certain from the application of such powders as irritate and inflame the skin, than from the use of the same remedies in a liquid form. Savine in fine powder is one of the best for common use. Common mustard, whether of the white or black kind, likewise answers; and I have known the powder of betony, and of white hellebore, both separately, and mixed in equal quantities, prove successful.

If the warts and skin lying between them be sprinkled over with any of these daily, a sufficient degree of inflammation is, for the most part, soon induced, and we know that it has gone far enough when some of the smallest begin to shrivel and drop off. At this time we

ought therefore to desist from any further use of the powder, always taking care to renew it from time to time, if the inflammation subsides before the excrescences are entirely removed. In few instances, the warts sprout up again after they were altogether carried off. When this takes place, the powder should be again applied over the whole seat of the disease, and continued till such a degree of inflammation is induced as the patient can easily bear. They will seldom or never return again, if the parts at this second application of the remedy have been made to inflame sufficiently.

These powders, even in a simple unmixed state, very seldom fail, but in some patients the warts are so firm, and the skin of the prepuce so thick and corrugated, that powders of a more powerfully irritating nature become necessary. In such cases a small proportion of red precipitate, finely levigated, being added to the *pulvis sabinae*, commonly answers. Calomel sometimes proves effectual, whether used by itself, or mixed with any of these powders, and a powder composed of equal parts of *alumenustum* and *mercur. precip. ruber.* seldom fails.

Even when warts are seated in the entrance of the urethra, they may be treated in this manner, at least I have often removed them in this situation by the application of these powders, and I never knew any harm produced by them. In one instance when the wart was farther up the urethra than usual, the excrescence was completely removed by the *pulvis sabinae* alone, but a considerable degree of pain was induced by it, which ended in a very copious puriform discharge. The urethra became tender and inflamed, through the whole length of it, and the running having all the appearance of the matter of Gonorrhoea, I suspected that a new infection had been communicated. My patient, however, assured me that this could not possibly be the case, as he had not for many months had any connection with women, and there was no cause to doubt his assertion. The running continued for the space of two or three weeks, with all the symptoms of a common clap, and was cured precisely in the same manner, viz. by the use of astringent injections.

## S E C T. XIV.

*Of Gonorrhœa Simplex.*

I HAVE endeavoured in different parts of this work to shew that the discharge in Gonorrhœa Virulenta is the effect of inflammation excited in the urethra and contiguous parts by the matter of infection being applied to them. In the end of the preceding section a case is mentioned, in which symptoms occurred exactly similar to those produced by Gonorrhœa Virulenta from the application of an irritating powder to the urethra; and there is reason to suppose that they may at any time be induced by whatever excites inflammation in any part of that membrane. A puriform discharge from the urethra, induced in this manner, and without any connection with an infected person having taken place, may be denominated Gonorrhœa Simplex.

We have already had occasion to see that a discharge frequently occurs in females, usually termed fluor albus, which, in particular circumstances, very much resembles Gonorrhœa Virulenta\*.

In men, we often meet with a disease exactly similar to this; where a copious discharge of matter takes place from the urethra, attended with a scalding heat in voiding urine, and all the other symptoms of Gonorrhœa, and where there is no suspicion of infection being communicated.

There is nothing more necessary than for practitioners to be aware of this, particularly the younger part of the profession, who are apt to suppose that every discharge of matter from the genitals, especially in men, ought to be considered as venereal. But although this is undoubtedly true in a great proportion of cases, yet every practitioner of experience must have met with many instances of the reverse, and in which the reputation

\* Vide chapter ii. section 10.

of the most virtuous people might have been ruined, were the distinction of which we are now speaking overlooked. I have met with different instances of men newly married being seized with this symptom, in some of which, although there was at first sight much cause for suspicion and anxiety on the part of the husband, yet on being informed by a person on whose judgment they placed confidence, that a running of this kind is not unfrequently induced by other causes, and that the discharge which had newly taken place, would probably shew, by its ending more quickly than *Gonorrhœa Virulenta* usually does, that it was of a different nature, they soon became less anxious, and at last were convinced of their fears having been altogether groundless.

In like manner, I have in different instances been consulted by women, who, on finding their husband's linen stained with matter, have fancied that they themselves had been injured by them; and the imagination being once affected, we all know how difficult it is in such matters to set it right. I was some time ago consulted by a lady in circumstances of this kind, who, from the cause I have mentioned, had long been reduced to a state of the greatest distress and misery. Her mind was in the first place deeply afflicted with the supposed misconduct of her husband; and she was fully convinced that she herself laboured under almost every symptom which attends the venereal disease. To this she was in a great measure led, by the opinion of a midwife, who unfortunately informed her, that from much experience in matters of this kind, she was convinced that she was poxed, and desired her to apply to me. Instead of this, she put herself under the care of one at a distance from town, where she resided, and who, from not having much experience in matters of this kind, was easily induced to believe that symptoms took place which did not exist but in the imagination of the patient. There was no external mark of disease, but she complained of pains in her bones; severe pains in the parts of generation and loins; uneasiness in the nose, throat, &c. In short, she had perused a modern treatise on the Lues

Veneræ, by which she had become acquainted with the symptoms of that disease, almost all of which she now imagined that she laboured under.

A complete course of mercury, besides a variety of other medicines, were given in the country, but no advantage being derived from them, the patient came under my care. It appeared at once that she was diseased in imagination only, for I did not find, on the most minute inquiry, that any symptom of the Lues Veneræ had existed from the first. She acknowledged, that at different times, both before and after marriage, she had been much distressed with the fluor albus; but this was the only disease of which she ever complained; and it never was of long continuance.

I endeavoured to convince her that she was perfectly sound, that she never had the disease, and that the matter which she had seen on her husband's linen, and which was the only foundation of her suspicion, was either produced by his connection with her while she was distressed with fluor albus, or by some other cause of a nature equally innocent. All this, however, would have proved ineffectual, but I luckily had an argument in my power which brought conviction along with it, and which, in the course of a few days, made all her symptoms vanish, which otherwise might have been of the most permanent nature. At the very time when she suspected her husband to have given her the infection, he had consulted me by letters, which I preserved, in which he expressed his astonishment at the sudden appearance of a discharge of matter from the urethra, accompanied with heat and uneasiness along the whole course of the passage from the glans to the bladder. He never had been infected with Gonorrhœa, and having had no connection with any other woman than his wife, of whom he could not entertain the least suspicion, he concludes his first letter by enquiring whether or not such symptoms ever originate from other causes than intercourse with an infected person, and at the same time wished that such medicines might be sent to him as would as quickly as possible put a stop to the discharge.

In my answer to this, which I also preserved, I mentioned several causes by which a discharge from the urethra may be excited, and especially the effect of repeated intercourse with women labouring under fluor albus, where the discharge is more acrid than usual. I at the same time sent him an astringent injection, desiring that it might be used if the discharge did not soon disappear. In a subsequent letter he informed me, that he had been perfectly convinced by my account of it that his disease was of an innocent nature; and as a proof of it he mentioned, that it went entirely off in the course of eight or ten days, without the injection, or any other remedy, being employed. A sight of this correspondence, which I was enabled to shew, could alone remove the distress under which my patient had long laboured.

I have since that period had occasion to know that her husband has at different times had a return of the discharge from the urethra, in some instances from exposure to much cold, fatigue, or wetness, and repeatedly from connection with his wife when she laboured under fluor albus.

This happened with a patient who never before had any discharge from the urethra; but a running is more particularly apt to occur from causes of this kind, in such as have been frequently liable to Gonorrhœa Virulenta. I know many of this description who uniformly experience a return of the discharge on being exposed to much bodily fatigue, particularly much riding on horseback, or jolting in a carriage on a rough road, on their being overheated with wine, or having more connection than usual even with sound women.

The irritation excited in the urethra by a stone in the bladder will, in some instances, induce a very copious discharge of matter. When this takes place from the bladder itself, the matter comes off mixed with the urine, and in no other manner; but when it proceeds from the urethra only, as often happens, it assumes all the appearances of Gonorrhœa Virulenta, and passes off whether any exertions be made to empty the bladder or not.

We are led to understand that people who are much employed in working among the warmer kind of spices are very liable to a scalding in making water accompanied with a discharge of purulent-like matter from the urethra. It is more particularly apt to occur in those who work chiefly among Cayenne pepper : Nay, it has been known to happen from a person carrying a few pounds of this article about with him for sale.

The most frequent cause of strictures in the urethra is Gonorrhœa Virulenta ; but they also occur from other causes. They have been met with in all periods of life, even where patients have never had any previous discharge from the urethra. They are particularly apt to occur in people advancing in years, between the sixtieth and seventieth year of age, and sometimes later. A person who in his youth has suffered much with Gonorrhœa Virulenta, is very liable to be attacked about this period with strictures in the urethra, but they likewise happen, as I have observed above, where no cause of this kind can be given for them ; and in whatever manner they are induced, they are very constantly attended with a plentiful discharge of purulent-like matter.

In some, these strictures have been attended with such a concurrence of circumstances, so similar to those which occur in Gonorrhœa, that the best practitioners have at first been deceived with them. Where the irritation in the urethra has been considerable, sympathetic swellings have occurred in the glands of the groin ; and one or both testicles have swelled from the same cause.

It is generally known, that a discharge may at any time be excited from the urethra, by the use of stimulating bougies. This has in different instances been put in practice, where violent pain and other bad symptoms have been induced by the sudden stoppage of a Gonorrhœa, but it has also been advised for the same purpose, that is, for exciting a discharge of matter, merely for the removal of pain, where neither Gonorrhœa nor any venereal symptom had ever taken place ; and it has never failed when the stimulus is of a sufficient strength of being attended with this effect.

We are informed by authors, that gout has in some instances been productive of a discharge of puriform matter from the urethra; and I have not a doubt of its happening in rheumatism. Of this I have met with different well-marked instances, where a flow of matter from the urethra has alternated with pains in the knees, and other large joints; and among labouring people accustomed to work much in water, such as ditchers, a discharge of this nature is by no means unfrequent. A patient of mine, who annually takes a great deal of exercise in following game, is always seized with a discharge of matter from the urethra when he goes in search of ducks, by which his feet and legs are kept immersed in water for several days together.

Other causes might be mentioned, by which a discharge from the urethra is at times produced, in every respect similar to the matter of *Gonorrhœa Virulenta*, but these are sufficient to shew that it may frequently occur from causes of the most innocent nature, and in persons entirely blameless. Of this, all who have done much business in this branch of practice will be easily convinced, as instances of it are often occurring; but the distress which the want of discrimination in matters of this kind is apt to excite, is often so great, not to individuals alone, but to the families with which they are connected; and I have happened to meet with so many disagreeable occurrences of this kind, which might easily have been prevented, that I judged it proper in this manner to take particular notice of it.

The fact being established that all the usual symptoms of *Gonorrhœa Virulenta* may be excited by a variety of causes, may be considered as an additional proof of the matter of *Lues Venerea*, and of that disease being different; for although the matter produced in this manner in the urethra is so similar to that of *Gonorrhœa* communicated by impure coition, that the one cannot be distinguished from the other, yet no person ever imagined that the symptoms of *Lues Venerea* could be produced by any of these, nor by any cause whatever, but the absorption of the matter of that disease itself.

It may also be remarked, that this opinion of the difference between these two diseases is farther confirmed by the method of cure being the same, whatever may have been the cause of the running. Whether the matter discharged from the urethra be excited by infection communicated by a person labouring under Gonorrhœa Virulenta, or by any of the causes I have enumerated of Gonorrhœa Simplex, the method of treatment ought not to be varied. It is true that the latter will, for the most part disappear, whether any remedy be employed for it or not ; but this will also happen with Gonorrhœa Virulenta. A cure, however, will be obtained much more speedily by a timely and proper use of injections than in any other manner ; and if this is admitted in one variety of the disease, it will be found equally applicable in the other. So far, indeed, as my observation goes, the discharge in Gonorrhœa Simplex is not more readily affected by the internal exhibition of medicines than we have shewn to be the case in Gonorrhœa Virulenta, while a proper application of an astringent injection very seldom fails in removing it. When, however, it seems either to depend upon general debility, or to be much connected with this state of the system, we find from experience that cold bathing, and whatever tends to restore the loss of tone that has taken place, proves more obviously useful here than in Gonorrhœa Virulenta.

END OF THE FIRST VOLUME.

A

T R E A T I S E

ON

GONORRHŒA VIRULENTA,

AND

LUES VENEREA.

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BY BENJAMIN BELL,

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VOLUME II.

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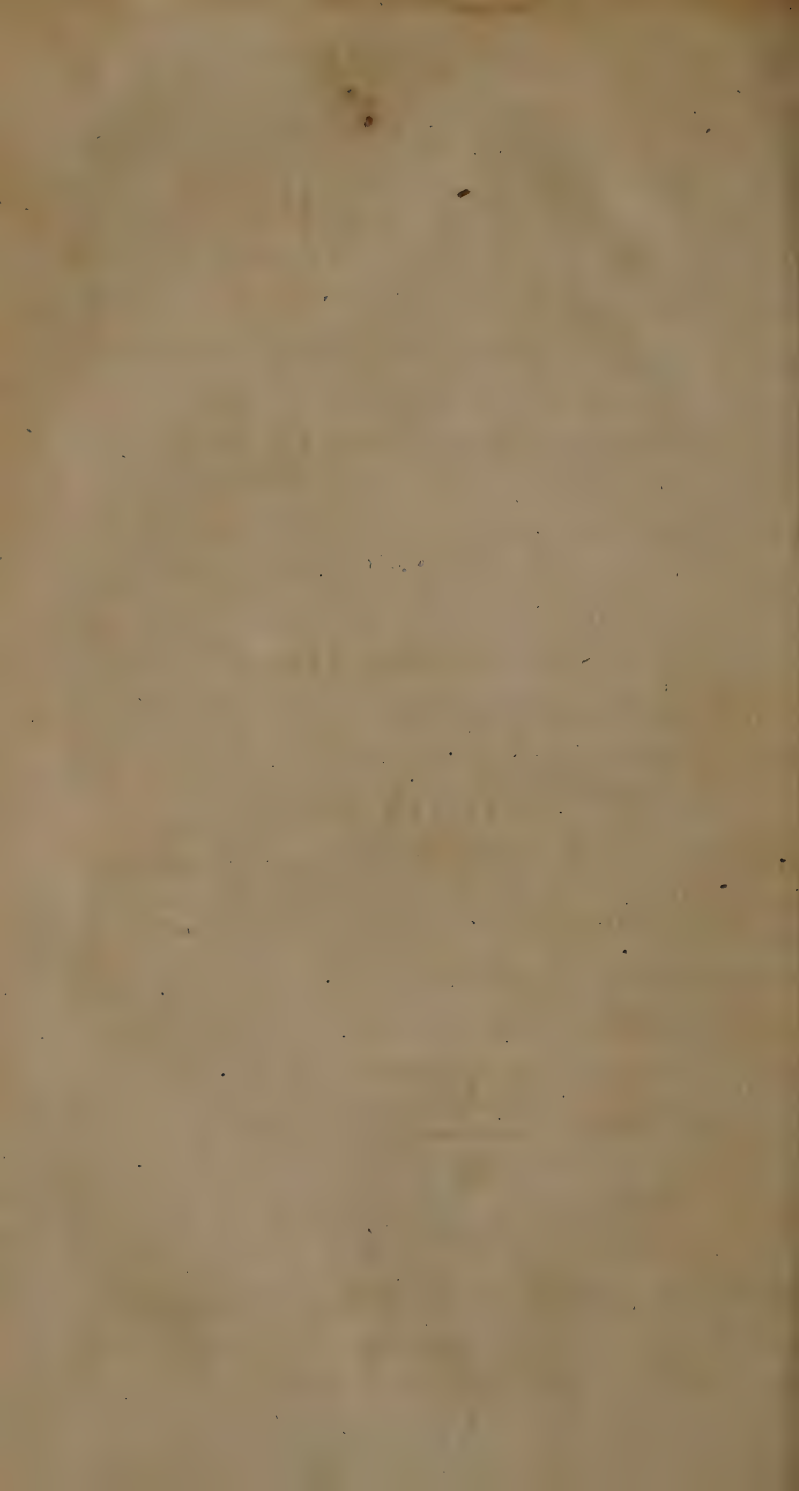
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A  
T R E A T I S E

ON  
G O N O R R H Œ A V I R U L E N T A,  
AND  
L U E S V E N E R E A.

CH A P T E R IV.

ON LUES VENEREA.

S E C T. I.

*General Observations on Lues Venerea.*

**T**HE Lues Venerea, Syphilis, or Venereal Disease, was first described with accuracy by the authors who flourished about the end of the fifteenth century. This induced many to imagine that it was not previously known in Europe; and Columbus with his followers having about this period returned from their first expedition to the West Indies, it has been supposed that they brought this disease along with them.

That the venereal disease might be met with by Columbus when he first landed in Hispaniola, I will not dispute. Like many other diseases, it might not be peculiar to one set of people, or confined to one hemisphere of the globe; but many arguments might be induced to shew that it was well known in the old continent, and that it prevailed among the Jews, Greeks, and Romans, and their descendants long before the discovery of America. This would lead, however, to a great length of discussion; and being

more a matter of curiosity than of real utility, I shall not enter farther upon it at present.

Various definitions have been given by Nosologists of Lues Venerea, but the symptoms of the disease are so numerous, and the appearances which it assumes are so complicated, that no definition sufficiently comprehensive and accurate, can be given of it. In some instances it appears in a particular spot only, and continues apparently local for a great length of time; while in a great proportion of cases it soon contaminates the whole system, producing a greater variety of symptoms than perhaps any other disease with which we are acquainted.

Different opinions have prevailed, respecting the manner in which Lues Venerea may be communicated, but it is now certain, that it can be produced in no other way than by direct application of the matter of contagion to the surface of the body; or by passing, as other hereditary diseases do, from parents to their children. The virus cannot be carried, as was once imagined, from one person to another by the atmosphere, but it may be applied in various ways so as to communicate the disease.

1. In a great proportion of cases the disease is given by one person to another in coition. The venereal matter resting upon one or more points, excites small inflammatory pimples termed chancres, from which it is carried by the absorbents into the system, for the most part producing, in its way, obstruction, and swelling in the contiguous lymphatic glands; and thus forming buboes in the groins.

2. It is frequently given by a diseased child to a nurse, in which case the nipples first become sore, and the matter as it passes into the circulation, excites swellings in the glands of the axilla.

3. An infected nurse can scarcely give suck without communicating the disease to the child. When this happens from venereal sores in the nipples, sores of a similar nature form on the lips of the child, and the matter from thence is taken up by the absorbents. But a child may also be infected merely by sucking

the milk of a diseased woman. In this case, the disease does not always appear at first about the mouth of the child : It proceeds more readily to contaminate the system than to produce any local effects. Many indeed allege that the disease cannot be communicated in this manner, and are of opinion, that a child cannot be infected merely by the milk of a nurse ; I am convinced, however, from a variety of facts, that the opinion I have adopted is well founded ; but we shall have occasion to consider it more particularly hereafter.

4. The foetus may also be infected as it passes from the uterus by the matter of venereal sores in the pudendum of the mother. Of this I have known different instances. In such cases, one or more sores first appear in particular parts, from whence the matter is carried by the absorbents into the system.

5. I have known different instances of the disease being given to midwives in delivering women with venereal sores about the pudendum.

6. In whatever manner the matter of Lues Venerea is applied to a wound, or to an inflamed or ulcerated surface, the disease will, in a great proportion of cases, be produced. Surgeons, in dressing venereal sores, are sometimes infected in this way ; and the disease has been communicated by performing the operation of blood-letting with a lancet that had previously opened a bubo.

7. Although we find in most instances of this disease, either that the matter has been directly applied to a wound or to an ulcer, or that by its own acrimony it had induced both inflammation and suppuration before absorption took place, yet cases sometimes occur in which nothing of this kind can be discovered, and where the matter is absorbed while both the cutis and cuticle remain entire. This will most readily happen where the cuticle is thin, as is the case in the glans penis and lips. Hence the system has, in different instances, been infected by matter left upon the lips in kissing, and in drinking out of a cup recently used by an infected person, and in

some of these without any ulceration being induced.

This mode of receiving venereal infection is not a frequent one, but as I have met with it in various instances, while the possibility of its existence is denied by many, I thought it right to mention it, in order to prevent these mistakes, and that mischief in practice which might arise from the prevalence of such an opinion.

So readily does the venereal poison enter the system, that it can scarcely be applied to any part of the surface of the body but with considerable hazard. For the reasons that I have mentioned, absorption will occur with more certainty in some parts than in others; but I know, from various facts, that scarcely any part of the skin is too thick to prevent it, particularly if the parts have been rendered tender or irritable, either by inflammation or any other cause. Nay, it sometimes happens where no affection of this kind is perceived. In two instances buboes occurred in the axilla, and the patients were poxed by the matter of venereal sores being applied to the fingers where the skin was sound; and in another, the disease was communicated by the patient wearing the same breeches which he had used three months before, when labouring under extensive venereal sores of the penis and scrotum, but of which he had been entirely cured. He knew that some of the matter had occasionally dropped upon the breeches, but this did not occur to him till the disease appeared about the time I have mentioned, in the form of a large ulcer on the upper part of the penis, and without even the possibility of his having received the infection in any other manner.

It is somewhat remarkable that the venereal virus should so readily enter the system when applied to any part of the surface of the body, when we find, from a variety of facts, that the absorbents of the stomach and intestines do not receive it. The matter of venereal sores, when mixed with water used for washing them, has, in various instances, been

swallowed by mistake ; but we have no instance of pox being produced by it.

In whatever way the matter of Syphilis is applied to the absorbents, when it has once entered the system, the effects which result from it are nearly the same ; but at present, I mean, in a great measure, to confine the description of the disease to its rise and progress in the most ordinary form of it, where the infection is communicated by one person to another in the act of coition.

The plan which I mean to pursue is, in the first place, to give an account of the different symptoms of Lues Venerea in the order in which they commonly appear ; and as our being able to ascertain the appearance of every symptom with as much certainty as possible is an object of the first importance, I shall describe each symptom under a distinct head, and at the same time shall point out such circumstances as most clearly serve to distinguish it from other affections to which it bears a resemblance.

2. I shall offer a few observations on the nature of the venereal poison.

3. An account of the different remedies used in Lues Venerea, particularly of mercury, and its preparations.

4. I shall treat of the employment of these remedies in the different symptoms of the disease.

5. Of Lues Venerea, as it appears in new-born infants.

6. Of some peculiarities of form under which this disease has appeared in Scotland and in Canada.

7. I mean next to treat of prophylactics, or the means of preventing infection.

8. To consider how far Lues Venerea is ever productive of other diseases ; and,

9. To give in an appendix formulæ of the medicines enumerated in the preceding parts of the work.

## S E C T. II.

*Of the Symptoms of Lues Venerea.*§ 1. *General Observations.*

THE venereal disease appears occasionally, as I have already observed, in a great variety of forms. For the most part it occurs locally at first upon some part of the surface of the body, usually upon the genitals, from whence it proceeds, and commonly with some regularity, to affect every part of the system. In others, the first symptoms which take place indicates an affection of the constitution, and the disease, instead of appearing upon the surface of the body, affects either the throat, bones, or tendons.

When Lues Venerea is not interrupted in its progress by the use of mercury or other remedies, the following is the order in which the symptoms commonly appear, viz. chancres; buboes; ulcers and inflammation in the throat; ulcers in the mouth and nose; eruptions, or blotches, on the surface of the body; ulcers in different parts; nodes, and swellings in the periosteum, bones, and tendons; excrescences about the anus; swellings of the testes; loss of hair from all parts of the body; blindness, loss of hearing, and other anomalous symptoms. In this order I shall proceed to treat of them.

§ 2. *Of Chancres.*

The first effect which usually results from the application of the matter of Lues Venerea to any part of the surface of the body, is a slight degree of inflammation. The part becomes itchy, red, and in some degree painful; and nature endeavouring to wash away the irritating cause, a quantity of serum is thrown out under the cuticle, in the form of a small boil or

pimple. This soon bursts, and leaves a sore of a corresponding size, foul and sloughy at the bottom, with hard retorted edges, and which, from the corroding appearance which it assumes, has by the French been denominated Chancre, a term which we have also adopted.

Chancres do not appear at any certain period after the application of the virus. I have known them form in less than twenty-four hours, while in others six weeks have elapsed. Three or four days is the most frequent period. The patient at first feels a sense of titulation over all the glans, and this is often productive of a frequent desire to void urine. On examining the parts some degree of tenderness is often perceived over the whole, but the chancre itself is seldom at first larger than a millet seed.

The cause of chancres appearing at such different periods after the matter of infection has been communicated, is not always obvious; but we may suppose it to depend in some degree upon the acrimony of the matter, and this again upon the matter being more or less diluted with serum, mucus, or pus. It may also in some measure depend upon the state of the parts to which the matter is applied. As these are more or less irritable, inflammation will more or less readily take place from the application of the virus; and where the parts to which it is applied cannot be irritated, and where inflammation is not therefore produced, no chancres will ensue.

Chancres appear occasionally over all the external parts of generation, and in some instances, even on the contiguous parts. I have known them form over the whole scrotum, on all parts of the penis, and even on the lower region of the abdomen, immediately above the pubes. They may indeed form on all the soft parts of the body, but they are most frequently seated on the glans penis, and on the preputium near to its connection with the glans; the former being covered with cuticle only, and the latter being a thin production of the cutis vera, both are easily made to inflame.

We also remark that chancres are frequent about the frenum, from the doublings of the skin being here particularly apt to retain the matter by which they are produced. In some instances they form on the very point of the glans, and even altogether within the verge of the urethra. Here, as well as when near to the frenum, they prove always more troublesome, and more difficult of cure, than in other parts of the penis.

There is sometimes only one chancre, but for the most part we meet with two, three, or even more; nay, in some instances, they cover the prepuce almost entirely. In this case, when they run into one another, none of them are distinct, and the whole, when thus connected, give the appearance of a foul ulcer, with hard edges, an unequal surface, and discharging a foetid, ill-conditioned matter.

The colour, quantity, and consistence of the matter of chancres is exceedingly variable. It is usually of a dirty green colour, and often tinged with red, the consistence thin, and the quantity large in proportion to the size of the sores. This last circumstance may be owing to the contiguous parts being apt to inflame, and although not ulcerated, to afford matter which we cannot easily discriminate from the discharge of the chancres.

In a great proportion of cases the appearances of chancres are so nearly the same that no person of experience can be under any doubt concerning them; but, as they sometimes vary in size, form, and other circumstances, some discernment is occasionally required to distinguish between them and sores of a different kind. The diagnosis of chancres is indeed a point of much importance in practice. We are apt to conclude that every sore upon the genitals is of a venereal nature, a circumstance which has subjected many to much inconvenience and distress. Mercury is commonly prescribed, but where the case is not venereal no advantage is derived from it, and the patient, after a tedious and painful confinement, finds the sores in no better state than at first. In all such affections we

should recollect that the penis and contiguous parts are liable to excoriations, pimples, and other eruptive complaints, equally with the rest of the body; nor should we too rashly suppose, as is frequently done, that all such appearances proceed from a venereal cause. It is not often indeed that we can be in doubt upon this point, for chancres, in most instances, are so distinctly marked that there is no room to hesitate concerning them; but where they do appear in a doubtful form, and especially if the patient has been liable to affections similar in appearance, and where no venereal taint could be suspected, some time should always be allowed to pass before any decisive opinion is given. When sores of this kind are of a simple, innocent nature, they usually heal in the course of a short time, merely by being kept clean, while they will gradually become worse if they are venereal if mercury be not employed, or if they are not treated with escharrotic or astringent applications. In all such circumstances no remedy should be made use of that can either promote or retard the cure of the sores, till we are enabled by farther observation to ascertain of what nature they really are.

We are most apt to doubt of the nature of these sores, when, instead of being small and circumscribed, they spread and occupy more space than chancres usually do. A real venereal chancre is seldom so large at first as the base of a split-pea, and the edges of the sore are elevated, somewhat hard, and painful; but although this is very commonly the case, yet, in a few instances, it is so much otherwise, that instead of a small circumscribed sore, we observe a slight superficial ulceration, not attended either with pain or hardness, and which, by the consequences alone, we find to be venereal. In all such cases certainty will be obtained from time and observation, and in no other manner. Nor can any harm ensue from a short delay; for while this will commonly determine the question, the same course of treatment will afterwards prove effectual which would have done so at first; and in this manner sores may be often cured in the course of a few days, in which, if a course of mercury had once been entered upon, confinement for several weeks would have been judged adviseable.

Besides the variety of chancres which I have mentioned, there is another, which it is proper to notice. Instead of appearing in the form of small circumscribed pimples, or superficial sores, such as I have described, they become suddenly elevated into extensive vesications. In these, a thin, clear lymph is sometimes contained; but more frequently the lymph is tinged with blood. The livid appearance with which this is accompanied gives at first cause to suspect that mortification may ensue, and accordingly chancres of this description have usually been judged to be of a more dangerous nature than others. I have not found, however, that this is the case. Their colour seems to depend entirely on the quantity of blood mixed with the serum which they contain, and on their contents being discharged, and the cuticle removed, the parts beneath have the appearance of a clean, excoriated surface, without being affected in any other manner.

When chancres are properly treated from their commencement, they commonly assume a healing appearance in the course of a few days; but in some instances owing to neglect, in others to some peculiarity of constitution, and perhaps occasionally to the matter of infection having been particularly virulent, instead of becoming clean, and of a red, healthy complexion, and which they always do before a cure takes place, they become daily more foul, and at the same time more extensive, and if their progress be not stopped by a judicious external treatment, combined with a proper course of mercury, they proceed to form sores of a very considerable magnitude. The danger from these, when seated in the preputium, is inconsiderable; but in the glans, this variety of chancre is apt to go to such a depth as to prove very alarming. The danger is sometimes great from the hæmorrhages with which they are accompanied, and we are often astonished at the rapid progress of the sores. In some instances they extend so quickly as to destroy a great part of the penis in the course of a few days.

This rapid progress, which chancres in some instances make, is, for the most part, supposed to depend upon some peculiarity in the constitution of the patient; for, in general, chancres remain circumscribed, and nearly

stationary, for a great part of their duration. But I have reason to think, that in some instances it proceeds from the nature of the matter by which they are produced : I conclude that it is so from chancres of this description being much more frequent at particular times than at others, and from observing them at the same time in different people receiving the infection from the same woman. About two years ago I met with more instances of this phagadenic chancre in the space of three or four months than I had seen for several years before, and in four of them the infection was traced to the same woman : The chancres in all of them appeared early, and made such rapid progress that very troublesome hæmorrhages occurred from them in the space of three or four days from their first appearance; and in a small town to which I was lately called for an alarming hæmorrhagy, produced by an ulcer of this kind, the surgeon in attendance informed me that in the space of a few weeks he had met with three instances of the same nature, in which the infection was also traced to the same woman.

Chancres of every kind, and in all their stages, are liable to inflame when roughly treated, particularly when the parts are much fretted by walking, or riding on horseback. This ought to be attentively guarded against, for inflammation not only promotes the absorption of the venereal virus, as we shall more particularly hereafter have occasion to mention, but when it affects the preputium, phymosis is commonly the consequence, and it proves always an untoward occurrence, as it prevents free access to the fores beneath, a point of the first importance in the treatment of chancre.

In women, chancres have precisely the same appearance as in men. They occur chiefly upon the internal parts of the labia pudendi, on the nymphæ, clitoris, and entrance of the vagina and urethra, but they are seldom or never altogether within either of these passages. They are most frequent about the under part of these labia, owing to the matter producing them being most apt to rest here, and from the same cause they often form upon the perineum, near the anus. In this situation they prove always highly distressful, and are more apt to terminate

in deep and extensive ulceration, than in parts not so liable to be injured ; for here they are fretted by every motion of the limbs, nor can the patient be seated without pressing upon them.

Whether in men or women, chancres on parts covered with firm skin have a very different appearance from such as occur upon parts more thinly protected. Instead of small circumscribed pimples, such as I have described, the skin appears red and tender for a day or two, and without being previously elevated into small vesicles, ulcerations break out at once. A foetid viscid matter oozes out, which, on being removed, leaves the bottom of the sores of a deep red colour, and their edges inflamed and ragged, and however entirely this matter may be wiped off, it is soon renewed, and in the space of a few hours forms into a thick firm crust, which either remains till it be torn off, or till it be completely separated from the contiguous parts by the formation of new matter beneath. This kind of sore is most frequent in parts covered with hair, particularly about the root of the penis in men, and above the pubes, and on the perineum in women.

### § 3. *Of Buboës.*

A venereal bubo is a painful swelling of a lymphatic gland, produced by absorption of the venereal virus. The whole surface of the body having absorbents spread upon it no contagious matter can be applied to any part of it but with the risk of injuring the constitution. In various instances of *Lues Venerea* the system is infected by the matter being carried directly into the blood, but in others a swelling previously takes place in one or more of the lymphatic glands lying between the part to which the matter is first applied and the heart.

These glands being formed by convolutions of the lymphatic vessels, are apt to be obstructed by any irritating matter which enters them. Hence a venereal bubo is a very frequent symptom of the disease ; and, as it is also one of these which gives the greatest distress and perplexity both to patients and practiti-

oners, I shall give a more minute description of it than might otherwise have been necessary.

The points of most importance in the history of buboes, and which we shall therefore be particularly anxious to ascertain, are, the state of parts most favourable to their production; their most frequent situation; the appearances which they assume at different periods of their duration, and the means of distinguishing them from other swellings which they resemble.

I have already observed, that the venereal virus may be absorbed where the skin is sound and entire: Hence Lues Venerea may take place where no external mark can be discovered upon the part to which the matter of infection was applied. It must be admitted that this is by no means a common occurrence; but I have met with it in such a number of well marked instances, that I have no more doubt of the fact than of any other that falls daily and clearly within our observation. It has happened too in almost all of these, that a bubo was one of the first symptoms of the disease. I have now upwards of twenty cases recorded of bubo taking place where not a vestige could be traced either of previous Gonorrhœa, chancre, or excoriation.

As the first two or three cases of this which occurred to me gave rise to a good deal of difficulty, by the uncertain and undecisive practice with which they were attended, I think it right in this manner to make it known. At the time it was an established opinion, as it still is with many, that buboes cannot take place without some previous formation of matter in the contiguous parts. In the cases to which I allude the cure was therefore protracted to a great length; for till the nature of the disease became more obvious, and which sometimes did not happen till other symptoms appeared, the use of mercury, from which alone relief could be obtained, was commonly postponed. The swelling was either supposed to proceed from a strain in walking or riding, or to originate from scrophula, by which a good deal of time was lost to no kind of purpose.

In a former part of this work we have seen that swellings take place in the glands of the groin from inflammation produced by gonorrhœa: These have, with sufficient propriety, been termed sympathetic buboes, and they are by no means uncommon; but the real idiopathic bubo, proceeding from absorption of syphilitic matter, is, in a great proportion of cases, preceded by some obvious local mark of the virus in the contiguous parts, most frequently by chancre. The matter passes so evidently from the chancre along the lymphatics to the contiguous glands, that one or more of these vessels are often found hard, and in a state of enlargement, in their course from the fores to the glands. This, in some instances, may happen from inflammation excited by the virus; in others, it may be altogether the effect of obstruction to the passage of the lymph. In some cases the lymphatics in this state of enlargement become totally unfit for the purposes of absorption; abscesses form in them; and on these bursting, they are succeeded by troublesome sores.

Chancres, in all their stages, and in every period of their duration, will occasionally produce buboes; but it is worthy of remark, that they seldom occur but with previous marks of inflammation: Hence buboes are most frequent in the incipient state of chancres, while the inflammation by which they were produced still prevails. Indeed more buboes take place during the first eight or ten days from the appearance of chancre than in any other period of equal extent in the whole course of the disease. When the original inflammatory state of chancres is over, and the parts are merely ulcerated without being painful, they will continue in this situation for a great length of time, without any tendency to buboes being perceived, till inflammation is by some cause or other induced upon them: Hence we find buboes very frequently occur soon after caustic has been applied to chancres, and not uncommonly after the parts have been dressed with precipitate or any irritating ointment. The pain which these occasion tends, in the first place, to create some degree of inflammation, to which buboes very frequently succeed.

It is not however the higher degrees of inflammation which prove most favourable to the production of buboes. When inflammation suddenly takes place to a great height, and spreads along the lymphatics leading from chancres the system is not apt to be infected. These vessels appear to be deprived by a great degree of inflammation, of the power of absorption, probably by their being rendered impervious; but it is equally certain, as I have already observed, that every slight degree of inflammation, as well as whatever tends to stimulate the extremities of absorbents, excites them more or less to action, and thereby tends to increase their power of absorption. Of this we have daily proofs in the practice of inoculating for the small-pox, where we find that infection very rarely takes place, perhaps not once in a thousand instances, if the wound at which the matter of infection was introduced is not excited to inflame: Hence the more irritation that is excited at the time of inoculation the more certainly the disease is communicated.

We may here mention another instance of the effect produced by the irritation of lymphatics in promoting absorption. In the application of unctuous substances to the surface of the body, particularly in the use of mercurial ointment, the power of friction is universally admitted; and we cannot suppose that it acts in any other manner than by stimulating the absorbents of the parts. Some indeed have asserted, that in matters of this kind no advantage is derived from friction, and that the absorbents would act with equal influence although the ointment was merely applied to them; but this is so directly contrary to the observation of all who have attended to the effects of friction in such cases, that no farther notice need be taken of it.\*

It has been remarked that old venereal ulcers do not produce buboes, and this has given rise to an opinion that the matter produced by these sores is not of a venereal nature, that is, that it would not contaminate the system were it carried into the blood by the absorbents. Mr.

\* It seems to be surprising that Mr. Hunter should hazard an opinion to this effect. Vide *Treatise on the Venereal Disease* by John Hunter.

Hunter was, I believe, the first who advanced this opinion, and I do not know that it has yet been publicly controverted; but so far as my observation goes I can decidedly say that it is not well founded. I admit that buboes, or swellings of the lymphatic glands, do not often proceed from venereal sores of long duration, particularly from such as arise from infection of the system; but although they are not frequent, yet in various instances we meet with them. I have seen them in the neck, from ulcers in the throat; in the groin, from sores on the toes and feet; and in the axilla, from ulcers on the fingers and hands: and the cause of their not being more frequent may be easily explained. We have just had occasion to remark, that absorption of the matter of *Lues Venerea* does not often happen if the parts to which it is applied do not inflame. Now we know that it is one of the most characteristic circumstances of old venereal sores, their being seldom accompanied with inflammation. This is particularly the case in ulcers of the throat, where inflammation seldom takes place to any distressful height. Swellings of the glands in the neck very seldom happen therefore from this cause, but still they are occasionally met with; and I believe that they happen as frequently here, in proportion to the frequency of the true venereal inflammation which takes place in these sores, as in any other part of the body. They occur more frequently in the groin and armpit, from ulcers on the extremities, than they do in the neck from ulcers in the throat; but this happens obviously from ulcers of these parts being more apt to inflame than venereal ulcers in the throat; and it serves as a farther proof of the effect of inflammation in increasing the absorbent powers of the lymphatics.

In a former work I have shewn the propriety of distinguishing venereal ulcers into two kinds. Chancres I would denominate primary ulcers, being the root or source of all farther infection, while all those may be denominated symptomatic which arise from the syphilitic virus having entered the system. That chancres should be more of an inflammatory nature

than symptomatic ulcers, and therefore that the matter produced by them should be more apt to stimulate the absorbents is not surprising; for we can readily suppose that the matter of these old ulcers must be rendered mild by being diluted. Even the matter of chancres become less virulent when the disease has been of long duration; and the discharge of an ulcerated bubo, although the bubo itself was produced by a chancre, is evidently of a milder nature than the discharge of chancres; for we seldom or never see new buboes arise in the glands lying contiguous to an old bubo in a state of ulceration: But we cannot surely imagine that this proceeds from the matter of these sores not being venereal. I believe it to depend upon the cause which I have mentioned. The matter of a sore in this situation must be continually diluted by the lymph which is at all times passing into the gland. This may render it so mild that it will not be capable of stimulating the contiguous glands, so as to form obstructions in them. It will rather pass easily along with the lymph into the general mass of blood; nor will it produce any immediate or obvious effect, even when it has entered the system; for when thus diluted by all the blood in the body, some quantity must be required to accumulate before any irritation will ensue; and till some degree of irritation is excited no evident effect will take place. It must either exist in such a state of acrimony, or in such quantity as to be capable of exciting irritation in some part of the solids, otherwise no mark of disease will occur from it: Hence may be accounted for all those instances of Lues Venerea breaking out at very distant periods after infection was communicated, and of the difference which in this respect we meet with in different patients; the disease in some breaking out in the course of two or three weeks from the time of infection, while in others it does not appear for eight, ten, or twelve months. Nay, there is reason to think that in some it has not appeared till several years have elapsed, and of which I could adduce such proofs as seem to render it certain.

That the matter of old venereal sores is capable of communicating infection few I believe will doubt. Many decisive proofs might indeed be given of it, but I shall only mention the following. When the matter of a chancre excites swelling in the contiguous glands we have few instances of the virus passing into the constitution. The glands will remain enlarged for a considerable time without any mark of the system being injured, probably from the matter of infection being stopped in its progress by the diseased state of the glands; but when buboes become ulcerated, if mercury be not employed, the disease, for the most part, soon breaks out in the throat and other parts of the body from the matter of these secondary or symptomatic sores having entered the circulation. In some instances, as I have mentioned above, a considerable time elapses before the constitution is affected by the matter of these sores, but it scarcely ever fails of shewing itself at last, and not unfrequently in the course of a short time from the ulceration of the bubo taking place.

When to this we add, that sores of this description are cured in the same manner with every other symptom of the venereal disease; that they daily increase in depth and extent till mercury is employed; and that they commonly put on a healing appearance in the course of a short time after this medicine has been used, no doubt can remain of their being altogether venereal. Every practitioner knows that in the treatment of venereal ulcers sores sometimes remain after every attempt that we can make for curing them, and long after the virus of the disease is removed by mercury. This, as we shall hereafter have occasion to mention, may happen from various causes; but it is not this state of these ulcers which we have now been considering: It is the real venereal ulcer of which we are now speaking, where the nature of it has not been changed, nor the virus of the disease removed by the use of mercury.

Venereal buboes are most frequently seated in the groin. This necessarily happens from the manner

in which Lues Venerea is usually communicated ; for it is the lymphatic glands most contiguous to the parts first infected that most commonly swell. There are few instances indeed of the virus passing thro' these and fixing upon others : Hence buboes arising from ulcers of the lips and gums are seated under the tongue, and beneath the lower jaw ; from ulcers in the throat, the glands of the neck become affected ; from sores on the fingers and hands, the glands swell about the wrist, elbow, and in the axilla ; and the glands about the knee, and on the upper part of the thigh, are most apt to swell from sores of the toes and feet.

In each groin, and somewhat higher than the root of the penis, there is a cluster or string of lymphatic glands, chiefly formed by the lymphatic vessels of the penis and contiguous parts. It is the most contiguous of these glands to the penis that are most frequently obstructed by the matter of chancres. It is proper, however, to remark, that buboes sometimes occur from the same cause in a string of glands lying upwards of an inch lower than these, owing to the lymphatic vessels of the penis passing in some instances out of their usual course and stretching down to these glands. From want of attention to this structure of parts, buboes in this set of glands have commonly been supposed to proceed from the system being infected, unless where they could be obviously traced to an ulcer in the foot or leg ; but we may here observe once for all, that buboes never occur from a general affection of the system alone. They proceed, I believe, in every instance from matter absorbed from a particular spot, and producing, as we have already perceived, obstructions in the lymphatic glands lying in its course to the heart. So evidently do buboes originate from local affections, that in chancres of the penis it is commonly the glands in the corresponding groin that swell. When a chancre is seated upon the frenum, or on any other part of the middle of the penis, the glands in both groins are equally apt to be affected ; but

when the chancre is confined to one side of the penis, or to one side of the scrotum, we meet with few instances of the glands in the opposite groin being obstructed.

In a great proportion of cases only one of the whole string of glands becomes affected; but occasionally it is otherwise. I have known four distinct buboes on one side, and three on the other at the same time, but here there have always been more chancres than one; for the most part indeed the penis in such cases is nearly covered with sores.

Were the whole lymphatic glands between the heart and the part at which the matter of Lues Venerea enters the system, liable to be affected with it this disease would be productive of still worse consequences than commonly ensue from it. Glands situated within the cavity of the abdomen would swell and suppurate, from which the greatest danger might be expected; but this does not happen. Scarcely an instance can be adduced of any internal glands being affected by the matter of syphilis; but this does not depend, as some have imagined, upon the tendency of this disease to affect the more external parts of the body only. The most obvious cause of it is, that the venereal virus is always absorbed from the surface of the body; we have seen that it is always the first glands it meets with in which obstruction occurs; and I have suggested what appears to be the most probable reason of the glands situated beyond such as are affected at first not being liable to suffer in future, viz. the stop which the swelling of the first of these glands gives to the farther absorption of matter, and the diluted state of the matter in the progress of the disease, by which it becomes incapable of exciting that degree of irritation necessary to produce absorption, or, if absorbed, that it is rendered so mild as not readily to produce obstruction in any of the glands to which it is carried. If the matter of Lues Venerea was applied to any internal part of the body, so as to excite ulceration, we have no cause to doubt of the effects resulting from it being the same that ensue from the

external application of it. The contiguous glands would be first affected, and from thence it would proceed to the rest of the system; but the disease never being communicated in this manner none of the glands seated internally can ever be affected.

These circumstances being premised, I shall now enumerate the appearances and symptoms of buboes, with the means of distinguishing them from swellings which resemble them. It must be kept in view that it is the real venereal bubo of which we are now speaking, and not that inflammatory swelling with which the glands in the groin are often attacked in Gonorrhœa. A description of that swelling is given in Chap. III. Sect. IX.

The most frequent seat of bubo, as we have seen, is in the groin, and a description of it in this situation will be sufficient. The first symptom of bubo is a slight degree of pain. This excites the attention of the patient, when on handling a small hard knot is discovered. In some cases this is accompanied both with pain and tension, stretching along an enlarged lymphatic vessel, in the form of a small cord, all the way to the penis; but for the most part the tumour is distinct, and not apparently connected with any other affection. Even where two or more buboes take place at the same time, although near each other, they are always distinct and unconnected at first, inasmuch that the patient himself very commonly points them out.

If mercury or other discutients be not now employed the tumour becomes gradually larger, and from being, as it commonly is when first perceived, of the size of a kidney bean, by the eighth or tenth day, and often sooner, it is usually of the size of a pigeon's egg. From the first appearance of a bubo there is some degree of rotundity in the form of it. In the middle it is somewhat raised and prominent, and becomes flattened towards the sides, and this continues during the whole progress of the swelling. As the size of the tumour increases it also becomes more painful, and the pain, which at first was confined to the bubo itself, spreads over all the contiguous parts. The patient complains upon the slightest degree of pressure, and he cannot walk or move but with much uneasiness.

Even when of this size, buboes will sometimes be removed by discussion; but when this does not happen, the swelling, which till this period usually retains a considerable degree of firmness, becomes in a gradual manner softer and more prominent; the skin, which for some time retained its natural colour, becomes red and tender; some degree of fever is apt to take place, and it is often accompanied with slight shivering fits. A fluctuation of matter is at length discovered, at first upon the surface of the tumour, and afterwards through a considerable part of the whole of it, and on this being discharged, either by the tumour bursting or by an opening being made into it, the parts are found to have all the appearances of a common abscess containing purulent matter.

The time which elapses in this progress of bubo, from the first appearance of the swelling till maturation is completed, is exceedingly variable, and depends upon a number of circumstances; upon the age and habit of body of the patient; upon the degree of pain and fever which take place; and on the gland being superficial or deeply seated; for we find by experience that deep-seated swellings do not so easily or so quickly suppurate as those which are immediately beneath the skin. Where the constitution is much relaxed and debilitated, buboes often remain indolent and stationary for a great length of time, while during the full vigour of health and youth, they usually come quickly forward: When accompanied with much pain and some degree of fever, from the first their progress in general is rapid, while they always advanced slowly when the pain is inconsiderable. This general observation may be made upon the maturation of venereal buboes, that they suppurate more quickly than glandular swellings of any other kind, and more slowly than common abscesses in the cellular membrane. Those who have not had much experience in this branch of business are apt to imagine, from the description which they have perused of the appearances of buboes, and perhaps from their having met with a few instances of the disease in its ordinary form, that no difficulty or doubts can occur concerning them; but this is far from being the case. Where a glandular swelling, such as I have described, appears in

the groin, either during the continuance of chancres, or soon after fores of this nature have healed, there will be no cause to doubt of its being venereal: But buboes do not always appear in a simple unmixed state. They are sometimes combined with other affections, where they necessarily assume other appearances; and they occur in some instances, as I have already mentioned, without being preceded by the least vestige of ulceration. This last circumstance of itself is commonly productive of doubt, but the difficulty is always increased when the swelling which takes place is not altogether venereal.

Swellings with which buboes may be confounded, and from which therefore it is proper with as much accuracy as possible to distinguish them, are of different kinds. In some cases these swellings occur in a simple unmixed state, in others they are blended with the real venereal bubo.

1. The most frequent cause of this kind of perplexity, is scrophula. When the venereal disease takes place in scrophulous constitutions, buboes as well as almost every other symptom, not only become much more obstinate, but assume appearances perfectly different from such as occur in the ordinary form of either of these diseases. Nor is it necessary that practitioners only should be acquainted with this. It ought to be made known in the most unequivocal manner to patients, otherwise they are apt to be perplexed and disappointed, and to blame those who have the charge of them, for what it is not often in the power of art to prevent.

Where evident symptoms of scrophula have previously taken place, or where that disease obviously exists at the time, there is no great difficulty of convincing patients of any symptom of Lues Venerea with which they are attacked, being likely to partake of it; but they should also know, that during the continuance of Lues Venerea, symptoms of scrophula frequently appear where that disease was not previously suspected to exist, and which otherwise might never have taken place. Of this I have met with many instances, where a scrophulous taint, which had till then remained concealed, broke out at once with much violence on the system being infected with Lues Venerea.

We judge that a swelling of this kind partakes of scrophula when, instead of yielding to a proper application of mercury, or coming forward to suppuration in the time which venereal buboes commonly require, it either remains stationary or advances in that slow gradual manner peculiar to tumours of a scrophulous nature. Tumours altogether venereal do not advance so rapidly as common abscesses, but they come much more quickly forward than scrophulous swellings. In most instances, a venereal bubo that is allowed to suppurate arrives at full maturity in the space of four or five weeks; often in less time than this, from its first commencement; whereas, when conjoined with scrophula, two or three months will pass over before this takes place. The pain, instead of being smart, as happens in buboes, is more of a dull obtuse nature. The swelling at first, instead of being firm, as we have described it to be in buboes, is somewhat soft and compressible, like dough; and even when matter is fully formed in it, the firmness and tension attending it is less. Neither is the redness of the teguments, which takes place as the swelling comes forward, of such a bright hue as in buboes.

This kind of connection between Lues Venerea and scrophula, may, in some instances too, be discovered by the size of these tumours. The true venereal bubo is no doubt very variable in point of bulk, but it never becomes so large as tumours of this mixed nature commonly do. Few of the former ever surpass the size of a pullet's egg, but the latter very commonly become two or three times larger than this. I have at present two instances of this kind of swelling stretching from the root of the penis, nearly to the spine of the ileum.

2. Venereal buboes are very apt, in the course of their progress, to be attacked with erysipelas. When this does not take place till towards the latter stage of the swelling no cause for doubt occurs from it, as the real nature of the primary affection is previously rendered obvious. But when it occurs at first, as sometimes happens, the practitioner, as well as the patient is thereby apt to be deceived. Tumours of this kind, instead of being circumscribed, with their limits distinctly marked, as happens

in buboes, are commonly diffused, and terminate in a more imperceptible manner in the contiguous parts. Instead of the vivid complexion of common inflammation, they are of a more deep copper colour, and the inflammation which takes place occurs suddenly, instead of approaching in a more gradual manner.

I may also remark, that the pain in these swellings accompanied with erysipeles, gives more distress from the sensation which it communicates of a burning degree of heat than we ever meet with from these lancinating pains which take place in the latter stages of the true venereal bubo.

Lumber abscesses have in some instances been mistaken for buboes. This, however, may at all times be easily avoided, and can never occur but from ignorance or inattention. Any person of experience will easily distinguish by examination with his fingers, the difference between the one and the other. In the one the swelling is seated in the cellular substance, while it is in the body of a gland in the other. Whoever has once handled these different parts in a tumified state will be at no loss to distinguish between them; and to those who have not had this opportunity it is perhaps impossible to mark the difference by any description that can be given of it. I may remark, however, that these two swellings are for the most part sufficiently distinguished by the symptoms which precede and attend them. If buboes be not always preceded by chancres, lumber abscesses are universally attended with pain about the small of the back and in the loins. This symptom indeed very commonly occurs as a fore-runner to the appearance of the tumour in the groin, and almost in every instance, before the tumour appears, the patient is much debilitated by the fever with which he is attacked from the first formation of the disease, and which never in any considerable degree happens in bubo.

4. In some cases, both inguinal and fœmoral herniæ have been mistaken for buboes. Of this I have known different instances with patients; nor is it surprising that it should be so, for both kinds of swelling appear nearly in the same part; they are neither of them attended with any alteration in the colour of the skin, when they first

appear, and they are both, for the most part, accompanied with some pain; but still the difference between them is so obviously marked that one can scarcely suppose it possible for any practitioner, however ignorant he might be, to fall into any difficulty upon this point, did we not know that in different instances it had happened. *Herniæ* have not only been mistaken for buboes, but buboes have been treated as *herniæ*.

Besides the very marked distinction which occurs between buboes and *herniæ*, in the appearances and other circumstances immediately connected with the tumours, and with which every practitioner ought to be acquainted, *herniæ* is for the most part sufficiently distinguished from the other by the sickness, obstruction of the bowels, and other symptoms with which it is accompanied, and which ought also to be so generally known that to enumerate them more particularly would be altogether unnecessary.

5. Ulcers in the feet and legs, from whatever cause they may arise, occasionally produce swellings in the glands of the thighs: These, in some instances, have been mistaken for buboes. The chief means of distinction are these; our knowledge of the existence of such a sore as we have found by experience to be productive of tumours of this kind; the seat of the tumours, these swellings being commonly on the fore part of the thigh, and somewhat lower than the ordinary seat of buboes; and lastly, their being attended with little or no pain, and very seldom proceeding to suppurate, but rather continuing indolent, and nearly of the same degree of hardness from the first. Even when they do contain matter the skin seldom loses its colour; a circumstance which never happens with buboes in a state of suppuration.

Women labouring under the venereal disease are equally liable to buboes with men; and the disease is so exactly similar in both that a description of it in the one sex renders it almost unnecessary to speak of it in the other. The only circumstance in which they are different is the situation of the tumours.

From the course of the lymphatics not being exactly the same in women the site of buboes in them must necessarily be different. I met with one instance of

the swelling exactly upon the middle of the mons veneris ; for the most part, however, they are situated on the course of the round ligaments, near to where they enter the abdomen, or higher in the groin, somewhat nearer the pudendum, than in men. These last become equally large with buboes in men ; but the others, it has been remarked, remain small, and still more circumscribed than buboes in their ordinary situation.

The symptoms we have hitherto been describing, viz. chancre and bubo, are at first always local ; that is, they are never produced by, although they are very commonly productive of, what may be called the constitutional state of the venereal disease. This has induced some to treat of these symptoms as distinct and unconnected with the constitutional affection ; and there would be much propriety in their doing so, were it possible to determine when the matter of chancre or of bubo has entered the system or not. But so far as I know this has never been done ; and there is much cause to imagine that no attempt towards it will ever prove successful. Some ingenuity has been shewn in endeavouring to ascertain the time which must elapse between the appearance of chancre and absorption by the lymphatics ; and even during this period, the disease, it is said, should be considered as local. To me, however, all such attempts appear to be both futile and dangerous. The point in question can never, in my opinion, be ascertained ; and while the contrary idea prevails, the constitution would in many instances be injured, as it would be very apt to lead, as with some it has already done, to a very hazardous practice, a dependence in the treatment of these symptoms upon local remedies. Chancres and buboes may both remain in a local state for a great length of time. Nay, it is possible that their cure might sometimes be accomplished without any of the matter arising from them entering the constitution ; but as this is mere conjecture, as we have no method of knowing when this might be the case, and as we know from daily observation

ry instance the constitution is injured even by the slightest degree of these symptoms, I judge it in every respect better to treat of them as constitutional affections.

The next symptom we have to describe is universally allowed to originate from the virus when it has entered the system.

#### § 4. *Of the Venereal Sore Throat.*

From whatever part of the body the matter of syphilis may have entered the lymphatics, we find that it is more apt to attack the throat than any other part. This does not happen, however, at any certain period. I have known it fix upon the throat in the course of ten days from the first appearance of a chancre, while in some instances it remains perfectly sound till several months after every external mark of the disease has disappeared.

In addition to what has already been said upon this point I may observe, that the throat, as well as other parts of the body, are most apt to be soon affected when no buboes take place. When the matter passes directly into the system, along the absorbents, the infection shews itself more early than where it is first stopped by buboes, and afterwards taken up by the lymphatics on these swellings becoming ulcerated.

In the venereal sore throat the patient is usually distressed with some degree of uneasiness in swallowing for some days before his attention is much excited towards it. He feels a sensation of fulness and tenderness, but not much pain. In some cases this prevails over the whole throat, but for the most part on one side only. Unless there has been some recent cause for suspicion the disease is attributed to cold; but the symptoms continuing, and an inspection being made, an ulcer is in most instances discovered on the part of which he complained in swallowing.

These ulcers in some cases make their first appearance upon the uvula, but they are much more frequent upon one of the amygdalæ. On first inspection they

are commonly small, but always foul, and accompanied with some degree of fulness or swelling, and with an erysipelatous redness of the contiguous parts.

In most instances the ulcer remains stationary for a considerable time, not going deeper than the thickness of a shilling, nor spreading to any greater extent than it occupied at first; but in others, unless the most effectual remedies are immediately employed, the ulcer not only becomes deeper, but spreads to a great extent, and in some cases with such rapidity, that I have known the uvula and all the contiguous parts affected in the course of a few days. In some the ulcer, in its course, gives only the appearance of foulness to the contiguous parts, which become covered with a yellow coloured slough, somewhat resembling the buffy coat of inflammatory blood, while in others it spreads in the form of a corroding sore, and destroys all the parts as it goes along. It sometimes destroys a great part of the tonsil before leaving it, but it more frequently spreads along the arch reaching from the tonsil, on which it is seated, to the uvula, and which, together with the contiguous parts of the velum pendulum palati, are commonly destroyed before the other tonsil becomes affected.

Even in this advanced state of these ulcers the patient seldom complains of much pain, if it be not during the action of swallowing. A general uneasiness is felt over the throat, but the pain is never so acute as the extent and appearances of the sores would give cause to expect. Wherever much pain takes place, we find that it proceeds not from the sores but from that kind of erysipelatous redness with which the contiguous parts are very apt to be affected, and by which such a distressful burning sensation is sometimes induced over the whole throat as renders the patient at all times very uneasy.

In some cases of the venereal sore throat this inflammatory redness takes place without any ulceration. If not prevented by mercury, ulcers would no doubt form at last; but I have known the parts re-

main swelled, and accompanied with that deep copper-coloured complexion which is very characteristic of these affections, for several weeks together, and without any degree of ulceration being perceptible. The disease in this state, although it is commonly fixed on one side of the throat at first, is very apt to leave it suddenly and go to the other; and this we find will happen again and again, till the one side becomes ulcerated, by which it is kept fixed to a particular spot.

Where the throat is affected in this manner, that is, where it is attacked both with the venereal virus and erysipelas, a very distressful symptom commonly takes place, a constant heat and irritation over the whole fauces, by which the patient is kept under a perpetual desire of clearing his throat, of an acrid, viscid mucus, with which it becomes so much stuffed from time to time as to render a great deal of exertion for this purpose necessary; and it prevails equally at all times, even during meals, and when the patient should be at rest.

That it is chiefly by the irritability which takes place here that this acrid mucus is produced I conclude to be the case, from finding that nothing tends so much to remove it as soothing anodyne applications, conjoined with the internal use of opiates.

It is commonly too in this inflammatory state of fore throats that patients in Lues Venerea are seized with deafness. Deafness may happen from other causes, as we shall afterwards have occasion to mention, but in this case I believe it to proceed from the inflammation spreading to the tuba eustachiana, so as to render it impervious. Inflammation may act in producing deafness, either by stuffing this passage with mucus, or by exciting adhesion between the sides of the duct. In the one case the deafness may only be temporary, but in the other it must necessarily, to a certain degree, remain permanent.

In most instances the venereal fore throat does not go deeper than the soft parts; producing sores, such as I have described, of various degrees of magnitude; but where the disease has either been too long neglected, or where mercury and other remedies employed do not prove successful, the bones themselves come in some cases to suffer. I

have known the body of the upper vertebræ of the neck affected in this manner, and it not unfrequently attacks the bones of the palate and back part of the nose.

One of the most distressful circumstances which practitioners meet with in diseases of the throat is, the uncertainty of distinguishing between venereal affections of these parts and others which resemble them, by which a good deal of time is either altogether lost, or employed with much doubt and undecision. From this cause alone ulcers are sometimes allowed to spread, where it might easily have been prevented by a timely use of mercury; and in other instances patients are put upon the use of this remedy where it ought by no means to be employed.

The complaints most apt to be mistaken for venereal affections of these parts are, those ulcers which occasionally succeed to long continued cases of catarrhal inflammation, and such as sometimes take place as the consequence of too much mercury having been used, or of the patient being exposed to cold while under a course of mercury.

The chief means of distinction between venereal ulcers of the throat and such as succeed to inflammation are these; ulcers from inflammation very commonly supervene upon abscesses; they are usually clean, and of a florid red appearance, and accompanied with a good deal of pain. The venereal ulcer again seldom or never produces abscess, and in the first place it always forms upon the surface. It is never clean till remedies have been employed for rendering it so; and although it is always accompanied with some uneasiness, the pain attending it is never so severe as in the other. I may also remark, that in the common inflammatory sore throat the contiguous parts do not usually assume that erysipelatous colour which very universally takes place in venereal ulcers, nor are they apt to induce that plentiful secretion of acrid mucus, and the symptoms which ensue from it, which we have shewn to be frequent consequences of the other.

We shall hereafter have occasion to speak more particularly of that variety of sore throat arising from the effects of cold when under mercury, as well as from an over-quantity of mercury having been employed. At present I may remark, that this is distinguished from the venereal sore

throat by a very considerable fulness or swelling, not only in both amygdalæ of the throat, but over the whole fauces, together with some degree of tumefaction of the parotid gland, as well as of all the salivary glands; circumstances by no means connected with venereal affections of these parts. The parts are not so apt to ulcerate as in the venereal disease, and any sloughy appearance which takes place upon them, instead of being of a buffy colour, as happens in the other, is white and milky, somewhat resembling those apthous crusts so frequently met with in the mouths of new-born infants. These sloughs too are more extensive than they ever are in venereal sore throats. In the latter they are always confined to such parts as are inflamed, while, in the other, they commonly extend a considerable way over the contiguous parts.

The natural unequalities on the surface of the amygdalæ have, in some instances, when in a state of inflammation, been mistaken for venereal ulcers; this, however, may always be avoided, and never can happen but from ignorance or inattention.

#### § 5. *Of Venereal Ulcers in the Nose and Mouth.*

Chancres, or primary venereal ulcers, rise occasionally, as we have already had occasion to remark, both in the nose and mouth; but sores of this description, wherever they are seated, having been already described in § 2. of this section, we are now to treat of those only which originate from the system being infected.

Next to the throat the matter of this disease fixes most frequently upon the nose, which, so far as I have had opportunities of observing, is more apt to be attacked with it than the mouth. I need scarcely observe, however, that some variety occurs in this. In a few cases the mouth is attacked before either the nose or throat. In others the disease appears first in the nose; but in a great proportion of cases it follows the progress I am now describing; after having for some time fixed upon the throat it goes to the nose, if the disease is not stopped in its course by a proper use of mercury. We may also remark, that although the ulcers in the throat should be

cured by mercury, if a sufficient quantity of the medicine be not employed for eradicating the virus, the disease, when it again breaks out, will appear most readily upon the nose, in the same manner as if no mercury had been made use of. This, however, is not universally the case; for in many instances we find it most apt to return to the parts where it was last seated, and after again fixing upon the throat it proceeds to the nose, as it would have done at first if no interruption had been given to it.

It does not however attack every part of the nose indiscriminately. Some have remarked that the matter of this disease has a particular tendency to fix upon the external parts of the body, that this always happens in the first instance, and when it proceeds from these to such as are more deeply seated that it does so with some regularity, by attacking such parts first as are most thinly covered. This, however, does not happen with any kind of regularity, and seems only to have been noticed for the purpose of supporting an opinion. Instead of going first to the skin, which it would do were this opinion well founded, the throat, as we have just seen, is most apt to be affected; and when it afterwards attacks the nose and mouth, it is not even the most external parts of these that are first apt to suffer.

In a few instances the disease no doubt appears first upon the outward parts of the nose, but in by much the greatest number the more internal parts are previously affected. The patient at first complains of a troublesome stoppage in one of his nostrils, accompanied with some degree of tenderness and pain at a particular point. This is often so deeply seated in the nostril that it cannot be seen, being most frequently upon some part of one of the ossa spongiosa; but when the under part of the passage is affected, together with a fulness of the membrane of the nose, a small foul ulcer is perceived, which is either covered with a white slough, or a firm brown crust, and on this being removed, although the parts beneath may appear clean and red, they soon become equally foul and sloughy as before.

In the commencement of these affections, the discharge is commonly inconsiderable ; but on a longer continuance, the matter forms in greater quantities, when it usually becomes thin and very foetid. If the ulcer is seated upon any part of the ossa spongiosa, the bone soon becomes diseased, and the matter acquires a black dirty colour ; it becomes larger in quantity, and the foetor still more considerable than at first. In this stage of the disease large portions of these bones are apt to separate and come away ; but before coming to this length, other symptoms have commonly made their appearance. A weeping eye, as it is termed, or a constant flow of tears over the cheek, frequently occurs in this stage of the disease, owing to the under end of the lachrymal duct, which terminates behind the os spongiosum inferius, being apt to be stopped by the disease of this bone. The sense of smelling becomes impaired, and in some is entirely destroyed ; and the figure of the nose is at last affected, in the first place becoming swelled, red, and painful, upon the parts immediately above those that are ulcerated, and afterwards losing its promiency by the bones of which it is formed coming away. This does not happen while the disease is confined to the spongy bones of the nose, but the septum itself becomes affected, in which case there is always much hazard of the face being disfigured by this bone giving way, when the nose is apt to fall nearly or entirely flat.

This is the usual course of ulcers in the nose ; but instead of attacking the internal parts in the first instance, we meet with them occasionally upon the cartilaginous parts of the nose, in which case they commonly begin with some degree of inflammation of the skin. After the skin has remained red and tender for some time, small ulcerations appear upon it, and these at last running together, a sore of more or less extent is formed by the whole. Like all other venereal sores, ulcers in this situation are always foul ; the matter they discharge is thin and offensive, and the skin for some way round their edges is of an ery-

sipelatous red colour. When the cartilaginous substance of the nose becomes affected, they often put on a cancerous appearance; nor has mercury the effect of stopping their progress so readily here, as in other parts of the body: This has in some instances been the cause of venereal ulcers in this part being treated as cancers, by which, even after being extirpated, the disease has again returned, when a cure might easily have been accomplished by the mercury having been continued for a due length of time at first.

Every part of the mouth is occasionally the seat of venereal ulcers; but although they appear from time to time on the inside of the cheeks and on the gums, they are most frequent upon the palate and on the tongue. In other parts of the mouth the ulcers appear without any previous warning, being for the most part fully formed as soon as the part affected is examined by the patient, and which is commonly done soon after it begins to excite any uneasiness; but in the palate no ulceration takes place till the parts have been inflamed for some time. A deep copper-coloured spot is at first perceived somewhere between the uvula and middle of the palate. This at last becomes ulcerated; and it is worthy of remark, that in no part of the body do venereal sores advance with such rapidity as they do here. In this respect they are different even from venereal sores in the throat. These last, as we have already had occasion to remark, seldom proceed to any great depth, nor do they advance with much quickness; but here their progress is not only rapid but they go at once to the full depth of all the soft parts covering the bones, and in most instances soon do much injury to the bones themselves. I have known the bones of the palate become diseased in the course of a few days from the first appearance of ulceration; and it is by no means uncommon to find a great part of the *velum pendulum palati* destroyed in the space of a few days from the time that it was first perceived to be affected.

Venereal ulcers of these parts have at times been mistaken for, and treated as ulcers of a very different kind, but with due attention this may perhaps in every instance be prevented. We are more apt to fall into the error of treating other sores as venereal.

Both in the mouth and nose venereal ulcers have been mistaken for cancerous sores; and in the nose they sometimes bear a resemblance to herpetic affections. From both of these we distinguish them not only by the history of each particular case, but by the different appearances which these affections actually assume. Where a patient with herpetic eruptions on other parts of his body is attacked with sores of a similar nature upon his nose or lips, there will be reason to conclude that they originate from the same cause; but where this is not the case, and particularly when it is found that the patient either labours under Lues Venerea at the time, or that he was lately affected with it, and not properly cured, this of itself will give ground to imagine that they are venereal. Herpetic sores seldom go to a greater depth than the skin; whereas venereal ulcers, whether on the nose or lips, are apt to penetrate deep into the parts upon which they are seated.

Cancerous sores are distinguished from these, as well as from every other variety of ulcer, by the scirrous hardness in the parts affected with which in every part of the body they are accompanied; and they are particularly distinguished from venereal ulcers by the smart shooting pains which they always excite; a symptom which does not usually occur in the others.

The mouth is equally liable with the throat to sores from an over quantity of mercury, and from patients being exposed to cold when under the use of it. These are more difficult to distinguish than any others from the real venereal ulcer; for besides the resemblance which in some circumstances they bear to them, as they commonly occur while the patient is under cure of some symptom of syphilis, this of itself is apt to create suspicion concerning them. Independent of this, the very situation of the sores gives some cause to suppose that they may be venereal, so that we are readily induced to consider every ulcer on these parts as being of this nature.

Sores arising from this effect of mercury, although somewhat resembling the true venereal ulcer, are readily enough distinguished from it by whoever has paid attention to this branch of business. Venereal ulcers are circumscribed, and in the mouth, whether upon the inside of the lips, cheeks, gums, or tongue, they are always of a corroding and somewhat of a cancerous appearance. There is seldom at first more than one sore, which does not, however, continue long stationary, for in this situation venereal sores extend quickly. Now sores arising from mercury are always diffused, and we commonly find them in different parts of the mouth at the same time. Like the first appearance of the venereal ulcer in these parts, they are always superficial, but they have not that corroding aspect which the other assumes; and although foul and sloughy, their colour is materially different from those that are venereal. The latter are commonly of a dirty brown colour, in some instances with a slight tinge of yellow; whereas the other has always a whitish appearance, as if the patient had newly been drinking milk.

The situation of the sores also affords some means of distinction. Those arising from mercury seem to be induced chiefly by the pressure of the teeth and gums upon those parts that are more particularly acted upon by the medicine; so that we always find them where the swelling is greatest, and the pressure most considerable: Hence they are most frequent on the sides of the tongue, near to the angles of the jaw; and on the insides of the cheeks; and when they take place in one of these situations, we usually find them prevail over the others. Now the true venereal ulcer attacks one part just as readily as another; seldom at first more than one part at once, and we find it just as frequent upon the upper part of the tongue, and on the under part of the mouth between the tongue and the teeth, where pressure has little or no influence, as in any other part.

With due attention to these appearances, and to the history of the case, no practitioner of observation will ever remain long in doubt; but where any uncertainty takes place, the best method of removing it is to desist entirely from the use of mercury. If the sores are venereal they

will soon become worse, if not, they will soon disappear when the swelling and tenderness induced by the mercury are gone. I think it proper, however, to remark, that sores of this kind do not always heal as soon as might be expected. In some instances, the swelling of the mouth, produced by mercury, continues for a great length of time. I have known it in a very obvious manner more than two months after any mercury had been exhibited. In such cases, the sores proceeding from this cause do not readily heal; and where due weight is not allowed to this circumstance, more mercury is in such a situation very often given, by which the constitution is not only apt to be injured but the very sores for which the medicine was prescribed are rendered worse. In some cases this no doubt proceeds from inattention or want of experience on the part of the practitioner; but it also originates from the fear and anxiety of patients, who, doubting of the real nature of the sores, and dreading their influence upon the constitution, are often so impatient, that in a concealed manner they persevere in the use of mercury long after they have been desired to lay it aside.

I have insisted the more upon this point from a very considerable number of cases having fallen within my own knowledge of the most distressful consequences being produced by measures of an opposite nature being persevered in.

Patients in general are so easily alarmed with whatever gives the least cause to suspect that the virus is not entirely removed, that even the most trifling circumstances, when treated with inattention by practitioners, may be followed with very important consequences. A spoiled tooth, with sharp ragged edges, is very apt to produce a sore upon that part of the cheek or tongue to which it is contiguous; and as it takes place in a slow imperceptible manner, without exciting pain, and produces a foul sore, somewhat resembling a venereal ulcer, if the real cause of it be not discovered and removed, very troublesome consequences are apt to ensue from it. From this cause alone I have known a patient put under a tedious course of mercury, which, with very ordinary attention, might have been prevented; for wherever an ulcer forms, either on the inside of the

cheek, or on the tongue, the state of the contiguous teeth should be examined; and where any spiculæ, or inequalities are discovered, they should be completely removed, and due time allowed for the sores afterwards to heal, before any other method of cure is recommended.

### § 6. *Venercal Blotches.*

Next to the parts which we have mentioned, the matter of Lues Venerea is most apt to fix upon the surface of the body in the form of eruptions, or what are commonly termed blotches. In a few cases the skin is affected before either the throat, nose, or mouth; but this is by no means frequent.

Every part of the body is liable to these blotches, but they appear more frequently on some parts than on others. The cause of this is difficult to explain, for when the whole system is affected we cannot *a priori* say why one part should more readily be attacked than another, but there is no doubt of the fact. In accounting for this disease fixing most frequently upon the throat, nose, and mouth, some have ingeniously suggested that there is probably some particular attraction between mucus and the matter of this disease, from these parts being plentifully supplied with mucous glands; and mercury being particularly apt to affect these parts, while we know that mercury in every form very readily combines with mucus, a theory has been built upon this to account for the action of mercury in the cure of the disease. Admitting the opinion to be well founded, but which does not appear to be the case, still it would not account for the matter of this disease being particularly apt to fix upon the skin, periosteum, and bones, parts which are less plentifully supplied with mucous glands than any others of the body. Neither does the idea hold good here which we have already had occasion to notice, and which some have endeavoured to support, of the matter of this disease having a particular attraction for parts that are most exposed to the atmosphere. In the rise and progress of the venereal eruption the reverse of this appears to be the case.

I have observed above, that every part of the body is liable to be attacked with these blotches; but we find from daily observation, that they appear both more frequently and more early in the disease, on such parts as are kept well covered than on those that are not covered at all. We no doubt meet with them both on the face and hands; but for one instance of this we have eight or ten of their appearing upon the breast and arms; and next to these, they attack in succession, and with some regularity, the shoulders, thighs, legs, feet, and hands. Of these last the extremities of the toes are often the parts first affected, particularly the parts lying beneath and round the nails.

Eruptions of this kind excite no pain: a slight degree of itchy uneasiness is the first sensation which they produce. When examined in this state, they are found to consist of a number of small distinct blotches, scarcely rising above the surface of the surrounding parts, and seldom exceeding the size of a sixpence. They are of a pale red colour, and when smartly rubbed the cuticle falls off in the form of fine bran, leaving the skin beneath somewhat more deeply tinged with red. The skin, however, does not appear to be otherwise injured; and when the blotches are allowed to disappear of themselves as they commonly do, the skin is, for a considerable time, found to be perfectly sound, and not even altered in colour.

But although eruptions of this kind disappear from time to time, no advantage is gained by this; they either proceed from one part to another, or they attack the same parts with more violence. In returning upon parts where they have been before, the cuticle is more elevated from the skin beneath; and on being removed, the skin itself is found to be either somewhat inflamed or in a state of tenderness approaching to ulceration. The skin not being in a state fit for producing cuticle, a scab or crust now forms upon these tender parts. In the course of a few days matter forms beneath, which for some time

oozes out at the sides, till the crust separating and falling off, the foundation is thus formed of the true venereal ulcer, of which a description will afterwards be given.

In some cases these red, or rather mottled blotches, instead of proceeding to a state of ulcer in the manner I have just described, are all covered over with an infinite number of very small pimples, each of which contains matter; and from these running together, a crust is formed, which likewise falls off at last, and leaves the parts in a state of ulceration.

When blotches take place among the hair, which they frequently do, as they do not in their first stage rise much above the level of the surrounding parts, and as they never in this state create much uneasiness, they are seldom perceived till a scab or crust begins to form, and as the matter on oozing out gets matted into flakes with the hair, we are longer in this situation than in other parts of the body, of getting a view of the parts beneath, which, on the crust falling off, are always in a state of ulceration, forming what is commonly termed the *corona veneris*.

In the palms of the hands and soles of the feet the firmness of the skin prevents these blotches from appearing so obviously as in other parts. The cuticle is here either separated in broad flakes, early in the disease, or if it is so firm as to confine the matter for a considerable time, it at last bursts out, when the parts beneath are found to be ulcerated.

It is chiefly in this eruptive state of the disease that it attacks the nails of the fingers and toes. The cuticle which surrounds them is perceived to be red and tender; the parts below the nails also become red, and the nails at last become loose, and fall off.

The complaints most similar to venereal blotches, and with which they have frequently been confounded, are all the variety of herpetic eruptions, particularly such as are dry, and do not yield matter. There is one remarkable difference between them in the nature of the matter which they afford. The

matter of the true venereal eruption is so tough and viscid that it does not crack, and commonly remains upon the parts perfectly entire, till it separates and comes away; whereas in herpes, although the matter is in one variety of the disease of a viscid glutinous nature, it does not form into flakes, as it very universally does in Lues Venerea. It sometimes forms into crusts, but these break and come away in small pieces.

In herpes the eruption appears most frequently in the form of a circle and the parts which it surrounds appear to be sound: Hence by the common people it is usually termed ring-worm. These circles or rings are of every variety of size, but they are seldom less than a half-crown piece. Now the venereal blotch is not often larger than a sixpence, and never exceeds the size of a shilling; and the whole skin of the parts affected appears to be nearly in an equal degree of disease. The mottled appearance which they assume gives cause indeed to suppose that some parts of the skin remain sound; but on examination with a magnifying glass, the whole is found to be more or less diseased. Whereas in the herpes, the parts surrounded with the ring are equally sound with any part of the body.

In judging of this point we derive no small assistance from attending to the situation of the eruption, as well as from the history of its rise and progress. We have had occasion to observe that the venereal eruption appears most frequently at first upon the breast and arms. Indeed this very commonly happens; whereas in herpes it is most frequent upon the under part of the abdomen, and about the hands and wrists.

When to all these circumstances we add, that in the venereal eruption there is commonly much cause for suspicion, from the patient's course of life, and perhaps even from the existence at the time of some other symptoms of the disease, and that in herpes we often find that the patient has either at some former period been liable to eruptions of a similar na-

ture, or that they have prevailed in his family, scarcely any cause for doubt will remain.

Herpetic eruptions and venereal blotches sometimes occur in the same person at the same time. In this case it may be difficult, or perhaps impossible to distinguish them; but no great inconvenience can arise from this, for the existence of the venereal affection being ascertained, this, as being the most important of the two, must have the specific remedy employed for removing it, and if the other eruption continues after the venereal blotches are carried off, proper remedies must afterwards be employed for it.

I know no other eruption that may not be easily distinguished from venereal blotches.

### § 7. *Of Venereal Ulcers.*

In § 2. of this section I have already given a description of chancres, or ulcers produced by the local application of the venereal virus. It is those ulcers we are now to consider which take place in more advanced stages of the disease, and which evidently proceed from the virus having entered the system. In § 4. and 5. venereal ulcers of the throat, nose, and mouth, have been described, but ulcers from the same cause appear occasionally in almost every part of the body.

But although no part of the body is perhaps entirely exempted from these ulcers, I mean no external part of it, yet some parts are much more liable to be attacked with them than others; and it is a fact worthy of remark, that there is no part of the surface of the body on which they do not occur more frequently than on the genitals. Indeed venereal ulcers of these parts, from infection of the constitution, is an occurrence which seldom falls within our observation. Almost every ulcer on the genitals may be traced to a local application of the virus.

We have already had occasion to observe that venereal blotches are apt to terminate in ulcers. Hence the venereal ulcer is most frequent on these parts

that are attacked with these eruptions, particularly the breast, shoulders, and arms. We often meet with them among the hair, and between the fingers and toes. In the latter stages of the disease indeed, I have met with them more frequently upon the sides of the toes than on any other part.

For the most part the venereal ulcer is preceded either by blotches, such as we have just described, or by a number of very small pimples; but I have met with some instances of a part becoming ulcerated without either of these appearances going before it. A slight degree of itchyness prevails for some days, and the part is scarcely observed to be discoloured before an ulcer is perceived.

In whatever manner a venereal ulcer may form, the appearances which it afterwards exhibits are nearly the same. A considerable destruction of parts soon takes place; more quickly indeed than usually happens from any other cause except mortification. Instead of proceeding gradually from the surface downwards, as other ulcers do, a certain portion of the soft parts between the affected spot of the skin and bone beneath seem to be contaminated at once; for almost as soon as the skin becomes evidently ulcerated, the corresponding parts beneath not only appear to be diseased, but are soon thrown so entirely out that scarcely any thing but the periosteum is left to cover the bone.

The sides and bottom of venereal ulcers of every description are at first always foul; but while chancres and all recent ulcers are usually white and sloughy, sores proceeding from diseases of the constitution are of a dirty brown appearance. The matter which they discharge is sometimes thin, and so acrid as to destroy the contiguous parts, but for the most part it is more tough and adhesive than good pus. It has often a singularly green colour, particularly in ulcers on that part of the head covered with hair, and it is always of a very disagreeable foetid smell.

These ulcers are seldom accompanied with much pain; for although the skin which surrounds them has always a tender appearance, being in almost every instance of an

erysipelatous red colour, they can bear to be handled more easily than fores of any other kind of equal extent. The parts, in some cases indeed, seem to be deprived of their natural sensibility; and I have in such instances found that one of the first effects of the mercury prescribed for the cure has been to render them more irritable.

Venereal ulcers arising from disease in the constitution differ from all such as are local in our not being able to render them clean or bring them to a healing state by any external application that we can employ. Where any doubt exists of the cause, they are often treated with local remedies; but no advantage is derived from them. Even the most powerful detergents have no influence. The parts still remain foul. The matter continues to increase in acrimony; and if a course of mercury is not prescribed, or if not given in sufficient quantity, the fores not only become more extensive, but more numerous, by parts taking on a disposition to ulcerate which did not previously bear any mark of disease.

The description which I have given of the venereal ulcer comprehends all the ordinary appearances of these fores; but some difference is produced in them by a variety of causes; by the nature of the parts in which they are seated; by the constitution being sound or affected with other diseases; and by the effects of such remedies as may have been employed without being sufficiently powerful to accomplish a cure.

In a great proportion of cases the venereal ulcer is seated in the skin and cellular membrane. In the first instance, indeed, these are the only parts that are affected; but in more advanced periods of the disease, we find the virus fixing upon the tendons, fasciæ of the muscles, periosteum, and bones. The parts least liable to be attacked with it are the glands, particularly those of the lymphatic system, but occasionally even they are affected with it. Now we may easily suppose, that the ordinary appearance of the disease, that which it exhibits when seated in the cellular substance, will be materially different from that which takes place from it in the tendons, fasciæ, glands, or bones. It is difficult, however, and perhaps impossible, to give any adequate description of the different appearances which

occur in these ulcers thus differently situated. It is from experience alone that a knowledge of this can be obtained.

The appearances of venereal ulcers are more or less affected by every disease which the system may at the time labour under. Some indeed have contended that no two diseases can exist in the constitution at the same time. This remark, however, is certainly ill-founded. From daily observation, we find; not only that the *system* may be affected with different diseases at the same time, but that two diseases may at the same time fix upon the same part. Of the first we have instances without end. It happens in the combination of fever with every variety of general cachexy, such as dropsy, jaundice, &c. of small-pox with scrophula, and scrophula with scurvy; all of which are often met with, existing, and making progress in the same person at the same time, and of local complaints combining in the same part, a variety of instances might also be mentioned. I have at present a person who had long been liable to piles, who some time ago was attacked with condylomatous excrescences about the anus from a venereal taint; to these succeeded a common abscess from inflammation, and last of all the parts have become cancerous. As all of these are obviously in existence at this moment upon the same parts, and as instances of other combinations of local diseases are occurring daily, it is with surprise and astonishment that I find much labour and ingenuity employed to prove that this connection of diseases never takes place, and in a work too which does the highest credit to the author.

The opinion which the author of that work endeavours to establish, is indeed so contrary to the observation of all who have paid attention to the subject, that I should not have judged it necessary to take notice of it, were it not with a view of preventing the unexperienced from being misled by it; for were it to be received as a general principle, it would in a variety of circumstances have no small influence on practice, and would often, I am afraid, be productive of distress and disappointment, both to patients and practitioners.\*

\* The publication to which I allude is Mr. Hunter's Treatise on the Venereal Disease.

If this opinion was well founded, every ulcer of the venereal kind arising from disease of the constitution should yield to mercury alone : Instead of which, do we not daily meet with sores of this kind, in which mercury by itself fails entirely, and in which, from the constitution being at the same time infected with scrophula, or some other disease, bark and other remedies must be employed before any progress towards a cure can be obtained ? This combination of Lues Venerea with other diseases, particularly with scrophula and scurvy, is indeed, I apprehend, the most frequent obstacle which we meet with in the cure of almost every symptom of this disease. Buboës, as well as ulcers, are always particularly obstinate where scrophula prevails ; and the slightest tendency to scurvy puts it out of our power to employ mercury in such quantities as the cure of venereal ulcers often requires. The effects of this are chiefly perceived at sea, where a patient with Lues Venerea is sure to have all the symptoms aggravated, particularly such ulcers as may prevail, on his being attacked with scurvy. The ulcers not only put on a worse appearance, but till the scorbutic affection is removed, the farther use of mercury is for the most part laid aside.

The description of the venereal ulcer which I have given above relates to the disease in its more early stages, and where no mercury has been employed. When mercury is prescribed, and has entered the system, sores of this description soon put on a healing appearance ; and if the medicine be continued, the cure usually goes on without interruption. But if, instead of being long enough persisted in, the mercury is laid aside before the virus is eradicated, an effect results from it which could not *a priori* be expected. This partial effect of mercury not only gives a different appearance to venereal sores, but commonly renders them more obstinate. If the sores have healed, and again break out, although they will not go to such a depth as they did in the first process of ulceration, they will spread farther, and become more numerous. By this imperfect application of mercury, a disposition seems to be formed, not only in the parts contiguous to the old sores, but in almost all the soft parts of the body, to go readily into a state of ulceration ; and although the new sores

which take place do not go deeper than the cellular membrane, they daily become more numerous, insomuch that the parts in which they are chiefly seated are apt to acquire a honey-comb appearance.

But although these newly-formed ulcers seldom penetrate to such a depth as those to which they succeeded, they assume every other appearance of the true venereal ulcer. They are foul and somewhat spongy; They are not attended with much pain, and the surrounding skin has an erysipelatous, or copper-colour complexion. In the course of my experience, however, they have always proved to be of more difficult management than the others; nor does mercury act with such certainty in removing them. The same sores either continue obstinately to resist the effect of this remedy, or, if these heal, others break out, and thus spread over a very considerable extent of surface, giving all the appearances of the phagadenic or depascent ulcer of different authors.

Hitherto I have been supposing that the disease is confined to the soft parts of the body; but where the ulcers as now described, have been neglected, or where the remedies employed for removing them have not proved effectual, they are apt to affect both the bones and tendons; and where sores take place upon any of these parts, their appearances are materially different from the common venereal ulcer. The parts affected, instead of being corroded, and hallowed out in the form of a cup, as they usually are in the venereal ulcer, are filled with a soft fungous substance, of an unhealthy complexion, which bleeds freely on being injured, and which always returns soon on being destroyed with escharrotics. The discharge of these ulcers, when seated upon carious bones, is thin and of a brown colour, and still more foetid than the ordinary discharge of venereal ulcers in the softer parts of the body. When the surface of a tendon becomes ulcerated the parts are not only soft and spongy, but more foul or sloughy than sores of almost any other kind.

There is another variety of venereal ulcer of which it is proper to take notice, I mean that which succeeds to the bursting of a bubo. Seated in the body of a gland, this

kind of sore has a very different appearance from the common venereal ulcer, which attacks, as we have just seen, the skin and cellular substance only. Buboës are always accompanied with pain and inflammation: Hence when matter forms in the it, it is of the purulent kind. But although the common venereal sore is always attended with some degree of redness, as this is not of the true inflammatory kind, being evidently erysipelatous, and which we find from experience never produces purulent matter, the discharge accordingly is different. But although the matter of buboës is always more or less purulent at first, it usually becomes thin and acrid at last, owing to sores of this description, on the farther continuance of the disease, being apt to become erysipelatous. Besides this change which takes place in the nature of the matter, the parts in which it was collected, although at first they have all the appearances of a common abscess, at last become foul and spongy; the edges of the sore become callous; and a much greater degree of pain takes place than almost ever accompanies the ordinary form of the true venereal ulcer.

But although the sore which succeeds to a bubo is necessarily at first always in the body of a gland, we find at last that it is apt to spread and affect the contiguous parts. The matter pervading the cellular substance sinuses form; and the skin becoming inflamed, the foundation is thus laid for the formation of other sores. In this manner the ulcers which succeed buboës frequently spread to a great extent, one part either breaking out as another heals, or perhaps the whole continuing open, so as to leave all the upper part of the thigh, and in some cases, the under part of the abdomen, covered with small sores.

No part of the treatment of Lues Venerea gives more distress to patients, or more perplexity to practitioners, than the management of this ulcerated state of buboës, which, besides being accompanied with much pain, is often one of the most obstinate symptoms of the disease. Instead of yielding to the use of mercury, sores of this description become often more obstinate after mercury has been employed; fever is apt to take place; and where the constitution is not very robust, they even sometimes end in the death of the patient.

This great degree of inveteracy in these sores may originate from different causes; but I have commonly found that it takes place in scrophulous constitutions, and in such as are particularly delicate. It may also be remarked, that among our common people sores of this kind are still more particularly obstinate in such as are under the necessity of living in damp situations, as is usually the case with weavers.

§ 8. *Of Nodes, and other Swellings of the Periosteum, Bones, and Tendons.*

A node is a hard circumscribed tumour, proceeding from a bone becoming affected with a venereal virus. The periosteum, tendons, ligaments, and even fasciæ of the muscles, are also liable to be attacked with the matter of this disease.

The venereal virus, however, does not readily attack these harder parts of the body. In a great proportion of cases it remains long in the habit before they become affected, and when tumours appear upon them, it is often at such a distant period from the existence of any other symptom of Lues Venerea, that both the patient and practitioner are apt to be deceived, and to conclude that they proceed from some other cause: Hence pains and swellings occurring in this disease are often treated as rheumatic affections, in consequence of which remedies are prescribed from which no advantage is derived; while mercury, from which alone relief could be obtained, is entirely overlooked. But although the true venereal node never takes place early in the disease, I mean such swellings as are of an osseous nature, and originate from the bones, yet the periosteum and tendons, as well as the fasciæ of muscles, are in some instances very early affected. This I have known to happen almost as soon as there was cause to suspect that the virus had entered the system. In such cases, however, some obvious reason could always be given for this variation in the course of the disease, by which the virus was made to fix up-

on these parts in preference to others, which usually are first affected. In all of them the patients were found to have been much exposed to the effects of cold and dampness, which I have had many opportunities of observing to have an evident influence in exciting the virus of this disease to fix early upon these parts. Soldiers infected with Lues Venerea, when exposed to the cold and dampness to which they are usually liable during encampments, are particularly apt to suffer with swellings of this kind.

Although it is of much importance to distinguish between such of these affections as arise from the bone, and those which proceed from the periosteum, tendons, and muscular fasciæ, yet this has not commonly been done with sufficient accuracy. They have all been considered as nodes, and blended under one general description, by which a good deal of perplexity has been introduced in the method of cure.

Nodes may appear upon every bone of the body, but they are most frequent where the bones are thinly covered with muscles: Hence they are most commonly met with upon the forehead, upon the forepart of the tibia, and on some parts of the radius and ulna. We also meet with them on the bones of the hands and feet. I never, however, saw them on the fingers or toes, but I have observed them upon the sternum and ribs. In two instances, where the patients died of other diseases after being cured of Lues Venerea, and in whom severe pains had occurred in the middle of the thighs, nodes or exostoses upon the femur were discovered. In one there were two small knobs or protuberances, in the other there were upwards of twenty, and all of them upon the anterior part of the bone.

These osseous tumours do not produce any alteration in the colour of the skin, unless they arrive at a much larger size than is usual. Their first approach is distinguished by a slight degree of uneasiness in the parts affected. This excites the patient's attention, when on examination a small hard tubercle or protu-

berance is discovered. This in a gradual manner becomes larger; and, while it increases in size, it also becomes more painful. By the time that it has acquired the bulk of half an ordinary walnut, and few nodes I believe are ever larger than this, the skin has commonly become red and tender: and ulceration at last taking place, the bone on being thus denuded, is not only found to be swelled but completely carious.

This is perhaps one of the most painful symptoms of Lues Venerea; for although the pain is at first always moderate, it never fails to become severe on the tumour advancing in size. This does not depend so much, however, on any alteration produced in the bone itself, as on the distention of the periosteum, which the tumour of the bone necessarily occasions; a circumstance of which we are rendered certain by the pain ceasing entirely on the protuberance of the bone being laid bare, either by an incision, or by the soft parts which cover it being destroyed by ulceration.

This description of a node, it is proper to remark, comprehends the full progress of this kind of tumour to its last and ultimate stage; a termination we seldom meet with, if it be not among the poor and destitute. Mercury is commonly prescribed as soon as the nature of the tumour becomes obvious, and as this puts a stop to its farther increase, it is by great inattention or mismanagement only that the surrounding soft parts are ever allowed to ulcerate. When ulceration does take place, the parts soon assume all the appearances of the true venereal ulcer of which we have already given a description.

The same bones upon which nodes most frequently take place are liable to tumours of a different kind, which, from their bearing a resemblance to nodes, have improperly been distinguished by the same appellation. By some, indeed, all tumours upon these parts, as well as such as occur in this disease upon the tendons, ligaments, and fasciæ of the muscles, are considered as nodes. This proceeds from the

confused manner in which these symptoms were described by the first authors who wrote upon this subject, by which others who have not paid particular attention to it have uniformly been misled. It requires, however, no nice discrimination to perceive that the tumours to which these parts are liable from Lues Venerea are materially different in their formation, and requiring also a difference of treatment it becomes an object of no small importance to have this pointed out.

The tumours which most resemble nodes are produced by an effusion of a small quantity of matter between the periosteum and bone. This seems to proceed from the internal surface of the periosteum becoming slightly inflamed, by which a few drops of a colourless fluid are poured out upon the surface of the bone. If not prevented by an early exhibition of mercury, the tumour, which was at first so small as to be with difficulty perceived, becomes gradually larger, and from being hard and colourless, it becomes soft and inflamed. Even when of the greatest bulk, however, at which it commonly arrives, this tumour does not exceed the size of the real node; for the periosteum not being capable of much distension, it either soon bursts, or the tumour becoming very painful, relief is obtained by making an incision into it.

These tumours, although at first always hard, are by no means so firm as nodes. This, even in their commencement, serves as a sufficient mark of distinction between them; and where matter is formed, as the tumour is thinly covered, a fluctuation is soon perceived, by which in the progress of the complaint, it is clearly and evidently distinguished from nodes, which always remain hard to the last.

When tumours of this description either burst or are laid open, although the bone may be found to be rough and carious, no swelling is discovered; and on the ulcer healing by the means to be hereafter mentioned, the parts appear to be reduced to the level of the surrounding skin; whereas in real nodes,

the tumour of the bone remains nearly, or perhaps entirely of the same size during the life of the patient, nor has mercury or any external application, any effect in reducing it. Some indeed entertain a different opinion, but where venereal tumours upon the bones have been removed by mercury, I have much reason to think that they have not been real nodes, but merely those small tumours produced by effusion which we have just been considering. At least this happened in different cases in which I have been concerned, where tumours, which at first were supposed to be formed of bone, appeared afterwards to proceed entirely from effusion; and I have not met with a single instance of a tumour evidently ossaceous being ever carried off by mercury, or any other medicine.

Besides the tumours we have described, there is still another, by some also improperly termed a node, with which the parts covering the hard bones are not unfrequently attacked in Lues Venerea. This variety of tumour occurs more early in the disease than nodes, and proceeds most frequently as I have observed above, from exposure to cold and dampness. It is also distinguished from nodes from its taking place in various parts of the body at once.

The patient at first complains of pains over the whole affected limbs; but he soon finds that one part of each limb is more severely affected than the rest. In the legs this happens about the middle of the tibia and fibula. In the thighs it occurs at the middle of the femur, and in the arms along the whole course of the radius and ulna.

For the most part these pains are considered by the patient as rheumatic; and I have known many instances, even of practitioners being deceived with them. No advantage, however, is obtained from those medicines which usually give relief in rheumatism; and at last the parts from whence the pains chiefly proceed are found to be swelled. But this swelling is very different from that fullness of parts which occurs in rheumatism; and it differs materially from the latter in the parts which it attacks.

The rheumatic swelling is chiefly confined to the joints: In very severe cases it no doubt stretches over every part of a limb, but it very commonly originates in the joints: Whereas those venereal swellings, although they sometimes stretch towards the joints, they very universally fix upon those parts of the limb that lie between one joint and another. In rheumatism the whole circumference of the limb becomes swelled in nearly an equal degree, while in the other the tumour is circumscribed, being most frequently confined to less than one half of the circumference of the limb; or when one limb is affected in different parts, as often happens in the fore-arm between the elbow and wrist, the seat of each tumour can be very distinctly traced. In the venereal swelling of these parts the tumour is firm, and so deeply seated that on a slight examination it is often supposed to proceed from the bone itself, while that swelling which takes place in rheumatism is of a more compressible nature, and appears even on the slightest examination to be altogether free from the bone beneath.

By attention to these circumstances, as well as from the history of the case, we need never be under much difficulty in judging of the nature of these swellings, nor in determining when they are venereal and when of a rheumatic nature. It is a prevailing opinion, that the difference between them is sufficiently marked by the pain in all venereal affections of this kind being particularly severe when the patient is warm in bed, while the contrary is supposed to happen in rheumatism. I have not found, however, that any dependence can be placed upon this; for both are apt to be very differently affected by the same cause in different patients, and even in the same patients at different times.

This variety of swelling seems always to originate in the periosteum, and to proceed from some degree of inflammation, which first begins in that membrane, and proceeds from it to the surrounding parts. Like every inflammatory affection of membranous parts, it does not readily terminate in suppuration. I have never known an instance of matter forming in it: Nor do those serous effusions take place here which are so frequent in rheumatism; a circumstance which constitutes another characteristic distinction

between the two diseases; for rheumatism seldom arrives at a great height without swellings taking place in the parts chiefly affected, and they seem all to be of the ferous kind.

Almost every author who has written upon Lues Venerea describes affections of the ligaments, tendons, and fasciæ of muscles, as frequent symptoms: This, however, is far from being consistent with my experience; nor do I suppose that they often take place but in the most advanced stages of the disease.

My own observation having led to this conclusion, I was induced to converse and to correspond upon the subject with others, who from having much employment in this branch of practice I had reason to suppose would be able to give me the best account of it. The prepossession which they had received from books had prevented them from entertaining a doubt of the frequency of this symptom, but none of them had seen it so often as to be able from his own observation to give a distinct or well-marked account of it.

Venereal ulcers often penetrate to ligaments, tendons, and other deep seated parts. In this manner every practitioner must have seen the parts affected with the virus of this disease; but in these the disease uniformly begins in the skin, and proceeds to the parts beneath. Of swellings in the ligaments, tendons, or fasciæ of muscles from this cause, I have met with very few instances; and even of these some were of a doubtful nature, as they occurred in scrophulous constitutions.

Those swellings, so far as I have had opportunities of observing, are not so painful as tumours of the periosteum and bones. They are small and circumscribed: At first hard and colourless, and afterwards on the skin becoming red, they turn soft, and soon burst. The matter which they discharge perhaps never partakes of purulency: It is thin, and either nearly colourless or somewhat tinged with blood. The sores which ensue are foul, and usually more difficult of cure than any other that we meet with in this disease.

I have seen different cases of tumours of a considerable size, seated upon tendons as well as upon aponeurotic expansions, and which were suspected to be venereal. These

have commonly been hard, and where they have come to create much uneasiness I have had occasion, in some instances, to remove them with the scalpel. Two of these were upon the tendinous part of the biceps; and although in both they had been suspected to be venereal, a very decisive proof was obtained of the contrary, for they were both extirpated, and the sores healed easily without any mercury being given.

§ 9. *Of Venereal Excrescences about the Anus.*

The parts of generation in both sexes are liable to be attacked with warty excrescences in Gonorrhœa, most frequently towards the end of the disease, when the running is nearly gone. In some cases they spread over all the contiguous parts, and even reach to the anus; but however extensively this may happen, excrescences of this warty nature which occur from Gonorrhœa are always local, as we judge from mercury having no influence in removing them, and from finding that topical remedies are alone to be depended upon for a cure.\*

But besides these, the parts about the anus are occasionally attacked with excrescences truly venereal, which appear in the latter stages of syphilis only; and of which we cannot accomplish a cure by any remedy that is not conjoined with a complete course of mercury. They are easily removed, either with the scalpel or escharotics; but if mercury is not administered they soon return with more virulence than at first.

In some cases they appear at the same time with venereal blotches in other parts of the body, which in many instances they resemble, being raised or elevated above the contiguous surface. Till of late I had not seen them but as a symptom of lïbens, and I did not suppose that they took place in the ordinary form of Lues Venerea. I have now, however, met with a sufficient number of instances to convince me that in this I was mistaken, and which shew that they not only occur along with eruptions in other parts of the body, but that altogether independent of these

they appear as a distinct symptom in still more advanced periods of the disease.

They are not so hard as those warts which succeed to Gonorrhœa; they are more of a fleshy nature, more tender, and therefore more apt to bleed. They have a more uniform surface; and instead of being formed of a number of small warts connected together, as these tumours about the anus produced by Gonorrhœa usually are, we find them composed of one uniform mass.

They do not approach so near to the verge of the anus as warty excrescences commonly do, being for the most part of the greatest extent and most elevated near to the tuberosity of the ischium. In some cases they become ulcerated, and discharge a great deal of very offensive matter; and when this happens in women they appear sometimes to be productive of buboes; at least in different cases where buboes occurred in women, no other source of infection could be perceived. Why they should not be the cause of buboes in men may be difficult to explain; but although I have often met with them in men in a state of obvious ulceration, I never knew buboes to be the consequence of them. Perhaps in men the lymphatic vessels of these parts do not pass through any external conglobate glands, and if this is the case they cannot produce buboes; for in the history of buboes we have seen that the matter of Lues Venerea does not excite swelling or obstruction in any of the internal glands.

For the most part any ulceration which takes place in these excrescences is very superficial, and does not reach beneath the surface. In some instances, however, sinuses form in them. In this manner I once knew a fistula in ano produced, for which it was necessary to perform the usual operation after the patient was cured of Lues Venerea.

Like other symptoms of syphilis these excrescences either continue nearly in the same state, or become gradually worse, as long as no remedy is employed for the cure of the disease in the constitution. They never disappear either entirely or in part by any effort of the system; but if by a partial course of mercury their progress is interrupted, although the virus of the disease is not completely

extinguished, they soon become less active than they were before ; in course of time they disappear altogether, and with whatever violence the disease may break out in other parts of the body, it does not again excite a recurrence of excrescences. In the latter stages of Lues Venerea, when by a long continuance of the disease the whole system may be supposed to be contaminated, we find a variety of symptoms existing at the same time ; otherwise this, as we have already had occasion to observe, does not readily happen ; nor do we commonly find early in the disease more than one or two of the symptoms subsisting at once.

§ 10. *Of Swellings of the Testes.*

Inflammation communicated along the urethra in Gonorrhœa is the most frequent cause of swelling of the testes. This has induced many to suppose, and some to assert, that this symptom is never induced by Lues Venerea ; that it is always a local affection, and never produced by any disease of the constitution.

That this is very generally the case I will readily admit ; for in a great proportion of cases we can clearly trace the disease to a local cause, and it is most easily removed by local applications ; but this is not always the case, for I have met with various well-marked instances of the testes swelling from disease of the system alone. Those who doubt the fact will ask, In what manner can this be ascertained ? By the swelling coming on without any external injury ; by no Gonorrhœa having preceded ; by the patient being known to be infected with Lues Venerea at the time ; and by the swelling being with ease and certainty removed by mercury, while it had daily become worse as long as those remedies were employed which usually prove effectual in swelling of the testes arising from Gonorrhœa.

With me these circumstances afford complete conviction, and as I have repeatedly met with them I judge the fact to be clearly established.

The very first approach of this swelling exhibits a difference between it and that which proceeds from Gonorrhœa. In this last a considerable degree of pain prevails from the first, and the disease begins in the epididymis :

but in the swelling from Lues Venerea the patient for a considerable time feels only a slight uneasiness, and even on the farther progress of the disease any pain that takes place is not acute, but dull and obtuse, such as might be supposed to proceed chiefly from the additional bulk and weight of the testes. The body of the testicle is always first affected; and it is only where the disease is neglected, or where the nature of it is mistaken, and mercury judged to be improper, that the swelling proceeds to the epididymis.

These circumstances of themselves might sufficiently distinguish the one variety of swelling from the other; but we also observe that in the swelling from Gonorrhœa the scrotum becomes red and painful very early in the disease, by the inflammation spreading from the testicle; whereas in the other the scrotum is very seldom affected, and in no instance till the swelling has been of long duration. Hence in the one the patient can scarcely admit of the parts being touched, while in the other little or no pain is produced, even when handled with freedom. In the hernia humoralis, as it is termed, the whole contiguous parts seem often to sympathise with the disease in the testis, by the pain spreading along the groins, and over all the upper part of the thighs and abdomen; while in the other any uneasiness which occurs is either confined entirely to the testicle or to the course of the spermatic cord. In this the swelling comes slowly and gradually to a larger size, insomuch that some weeks will pass before it arrives near to its height; while in the other the tumour is often as large in the course of forty-eight hours as it ever becomes.

Those who doubt of the existence of the swelled testes from Lues Venerea assert, that where the testicle becomes hard and enlarged, where no external violence has been applied to it, and without being preceded by Gonorrhœa, that the disease is always to be considered as of the true schirrhous kind, forming what in general is called sarcocele. This, however, is by no means the case, and the means of distinguishing between sarcocele and the true venereal swelling of the testicle are numerous and obvious. In the former the testicle has a considerable degree of

hardness from the first. The patient is from the first commencement of the disease, distressed with sharp stinging pains through the body of the tumour, and by degrees these become as severe as they usually are in any case of cancer. The swelling, although at first smooth, soon becomes knotty and unequal, and at last it very constantly attacks the spermatic cord, which also becomes hard, knotty, and painful. Now, in a swelled testis from Lues Venerea, although a considerable degree of firmness takes place, it is by no means of that hard nature which always accompanies the scirrhus. We meet with no stinging pains, not even in the most advanced stages of the disease. The swelling never becomes hard and knotty, but retains a smooth, equal surface, and we meet with few instances of its proceeding to the spermatic cord.

In addition to the description which I have given of the disease I may remark, that in its more advanced stages this swelling sometimes suppurates, and discharges purulent matter; while in sarcocele, whenever the tumour bursts, it yields nothing but a thin, bloody, sanies, as commonly happens in all cases of cancer. The sores which ensue to the bursting of these tumours are fully as different in their appearances as the tumours are different by which they were produced. In the sarcocele the edges of the sore are hard and retorted, accompanied with every other circumstance that usually takes place in cancer; whereas in the venereal swelled testicle, although the edges of the sore are hard, they are neither raised nor retorted, and the sore, while it is foul and sloughy, as venereal sores always are, exhibits no appearances of cancer.

In very advanced states of this disease we sometimes find it accompanied with effusions into the tunica vaginalis testis, producing what may be termed a complicated hydrocele. This, however, is a circumstance equally common to every tumour of the same magnitude and duration to which the testicle is liable. It even sometimes succeeds to the hernia

humoralis, but not so frequently as to swellings of greater permanency.

If this affection of the testes is neither uncommon nor difficult to distinguish, it may be said that the particular description which is here given of it is unnecessary; and I should have judged it to be so, if in some late publications a contrary opinion had not been strongly inculcated. Even this would not have been a sufficient reason for dwelling long upon any point of little importance, but in the subject we are now considering many circumstances are involved. Any theory we can establish of the nature of the venereal poison, and of the means employed for removing it from the constitution, is in some measure connected with it; while, at the same time, it is obviously a point of real importance in practice.

### § 11. *Of Alopecia.*

The disease termed Alopecia by Nosologists, or falling off of the hair, may be produced by different causes; but it is most frequently met with as a symptom of Lues Venerea in the more advanced stages of the disease.

The hair of the head first separates in greater quantities than usual on being combed. The eye-brows become more thinly covered, and if a stop be not put to the disease of the constitution, all the hair of the head, as well as of the other parts of the body, soon falls off.

Before the hair begins to separate, a scurf is usually perceived among the roots of it, which comes away in great quantities on the head being combed, commonly in the form of fine bran. On this scurf being removed, the skin beneath has a red complexion; but the patient does not complain either of pain or tenderness, and the same kind of brany powder forms repeatedly on the same parts, although carefully removed from day to day.

In some instances the hair is renewed in as great quantity as at first; but this is not a frequent occur-

rence : It only happens during youth, and where the virus of the disease is quickly and completely eradicated. In more advanced periods of life it always remains thin, not only upon the head, but on the eye-brows ; and when the eye-lashes fall out from this cause they very seldom return.

As mercury has commonly been given before the hair begins to separate, and often in considerable quantities, this symptom has by some been supposed to be more the effect of the medicine than of the disease. This, however, has not been the result of my observation. I have seen different instances of the hair dropping off in Lues Venerea, where no mercury had been employed ; and were it to be produced by mercury, it would necessarily occur more frequently, and it would happen with equal readiness in every disease for which mercury should be prescribed.

I consider it to be in almost every instance the effect of that scurf which in Lues Venerea sometimes forms among the roots of the hair. The matter by which the scurf is produced getting access to the roots, soon cuts off their connection with the surrounding parts.

### § 12. *Of Blindness as a Symptom of Lues Venerea.*

In the first chapter of this work some account is given of blindness produced by the retropulsion of the matter of Gonorrhœa. But blindness which takes place in Lues Venerea is materially different both in its rise and progress, and in the remedies by which it is with most certainty removed.

Blindness from Gonorrhœa is always accompanied with much pain. A great degree of irritability, along with a plentiful discharge of matter from the eyes, and more or less inflammation, are the first symptoms of the disease. But in Lues Venerea, loss of vision, to a considerable extent, has commonly taken place long before much pain is experienced ; and if inflammation ever occurs, it is not in any remarkable degree.

The matter of Lues Venerea acts in different ways in producing blindness. One of the most frequent seems to

be by injuring the optic nerves, whether by acting immediately upon the nerve itself, or by first exciting effusion, or the formation of tumours in the contiguous parts, by which compression of the nerve is at last produced.

It is in this manner I conceive that gutta serena takes place in the latter stages of Lues Venerea. In some cases it comes on in a gradual manner. The sight becomes less perfect from day to day; and both the patient and his friends are surprized that this should happen while the external appearance of the eye is not affected. But for the most part the disease takes place almost instantaneously, the patient being entirely deprived of vision in the course of a minute or two from the time that his eyes became uneasy. Still the external parts of the eyes remain sound, but the pupils are always greatly dilated, and incapable of any degree of contraction, even when exposed to the strongest light.

In some cases only one eye is affected, but for the most part the disease attacks both at the same time.

Cataracts sometimes form from this cause. I have met with different instances of this disease in the latter stages of Lues Venerea, where no other cause could be assigned for it; and I conclude that it was the effect of the venereal poison, from the peculiar manner of its approach. The lens is at first only partially affected, white streaks appear upon different parts of it, which extend by degrees, so as to produce opacity over the whole of it.

But the most frequent effect of the venereal virus upon the eye appears upon the vitreous and aqueous humours, and on the lucid part of the cornea. In some cases these humours are deprived of their natural transparency, they become somewhat milky, and at last completely opaque. At other times this is evidently connected with an opaque state of the lucid cornea, which becomes white and thickened, and in some instances so prominent as to disfigure the whole globe of the eye. When this diseased state of the coats of the eye, and of the humours which they contain occur at the same time, the whole body of the eye affords the appearance of one confused mass. Neither the chrySTALLINE lens, nor any particular part of the eye can be distinguished.

Before this opacity takes place in the cornea, a number of obstructed vessels are perceived on it, accompanied with some degree of tenderness on being exposed to light: This gives cause to suppose that inflammation is about to occur; but the disease in this form makes no farther progress. The cornea in some spots becomes white and opaque, probably by the effusion of part of the contents of these turgid vessels; but all this takes place with little or no pain, and without any of the ordinary concomitants of inflammation. Neither does this whiteness of the cornea terminate in suppuration, as opacity of this membrane produced by inflammation is apt to do. It becomes even more white than the tunica albuginea itself, and evidently more thickened, but I never saw matter form in it.

In some cases the venereal virus fixes upon the eye-lids, and chiefly upon their cartilaginous borders. This sometimes happens by itself, but for the most part it is connected with syphilitic eruptions in other parts of the body. The parts become red and somewhat tender, and an effusion takes place among the eye-lashes, either in the form of a dry scurf, or of a gummy viscid matter. In this latter state this effusion proves always very troublesome, particularly after sleep, as it glues the eye-lids so firmly together as to render it difficult, and even painful to open them.

In this affection of the eye-lids, I have in different instances, observed a symptom which has not, so far as I remember, been remarked by authors. The tears at first form in drops near the internal angle of the eye, and this terminates in a constant trickling over the cheeks. Those who are not accustomed to examine the eyes in this state are apt to consider this flow of tears as the commencement of fistula lachrymalis, whereas it proceeds from a cause which must effectually prevent the formation of this disease. On minute inspection, it appears evidently to arise from the puncta lachrymalia being obstructed by the viscid matter forming upon the cartilages of the eye-lids, by which the tears which should pass by these openings into the lachrymal sac, and from thence into the nose, are necessarily forced over the cheeks. In some cases this weeping state of the eyes proves to be temporary, and dis-

appears with the cause by which it was produced; but in others it continues permanent, owing, I suppose, to the puncta being obliterated by the long continuances of the disease.

This constant flow of tears over the eye-lids proves always troublesome, and in some cases even painful, by exciting tenderness, and occasionally some degree of ulceration of the cheeks.

### § 13. *Of Deafness from Lues Venerea,*

When treating of the venereal sore throat in § 4. of this section, we had occasion to remark that a certain degree of deafness is, in some cases, a consequence of that symptom, the end of the Eustachian tube, when it terminates in the throat, being obstructed. The effect resulting from this being in some instances considerable, we are led to suppose that this passage to the ear is of no small importance to the sense of hearing: I have known a very distressful degree of deafness produced by it.

Besides this, the venereal disease in some instances excites deafness by fixing upon the ear itself. The bones seem to be most liable to be attacked with it. When this takes place the patient is at first seized with a partial loss of hearing. This is succeeded by a discharge of foetid ill-coloured matter; and in some cases the bones themselves come away. I need scarcely observe, that a total and permanent loss of hearing ensues.

Where venereal blotches prevail universally over the body, and have been of long duration, they sometimes fix upon the ear, chiefly upon the lap of the ear. In some cases I have known them to affect the meatus externus so as to induce to a temporary deafness. In this event the passage is either stuffed with a dry scurfy matter, or the lining membrane of the passage becomes thickened, and occasionally tender and ulcerated. If this proceeds no farther into the ear a recovery may still take place; but as the same kind of tenderness is apt to attack the tympanum, deafness even from this cause often proves permanent.

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§ 14. *Of anomalous Symptoms.*

Besides the symptoms of which we have given a description, there are others which from their appearing with less regularity may be termed anomalous. But these, although they occur occasionally in every stage of the disease, prevail with most frequency when the infection has been of long duration.

The most troublesome of these symptoms are chops, or clefts in the palms of the hands and soles of the feet. A red somewhat purple-coloured eruption appears upon the skin of these parts. The cuticle separates and comes away: Still the skin remains discoloured; and at last chops form in different parts of it. They generally remain dry, but in some instances they discharge a thin acrid matter. They are seldom painful; but they are always obstinate and difficult to cure; and the cuticle is in some cases so completely removed, that by the tenderness which succeeds to this the patient is for a considerable time deprived of the use both of his hands and feet.

In some a disposition is formed in the skin and cellular substance of different parts of the body to become thick, rough, and unequal, producing what by Nosologists is termed elephantiasis, or at least an affection which very much resembles that disease. In most instances where this has occurred, different parts of the body have been affected with it at once; but in others I have known it confined to one of the extremities. In the slighter degrees of this affection the inconvenience produced by it is inconsiderable, and it is seldom accompanied with much pain; but where the limbs swell so much as they sometimes do, the distress which it excites is necessarily severe. A limb which swells from this cause becomes first very unwieldy; and on the swelling increasing, it at last

bursts into fores, which discharge a thin acrid matter, are always foul, and very seldom heal.

I have met with different instances of this thickening of the teguments in the scrotum. The skin retains its natural colour; but it becomes firm, and so much thickened as to form a tumour which in some cases acquires a very considerable bulk. All of them that have fallen within my observation came from warmer climates, and two of them were in negroes. They had been mistaken both for hydrocele and hernia, but I found in all of them that the tumour was produced entirely by a thickened state of the scrotum.

From a hernia in the scrotum they are distinguished by the spermatic cord being entirely free of swelling; by the absence of all the symptoms of hernia; and by the swelling being much more firm than it ever is in hernia. The same degree of firmness serves to distinguish it from hydrocele, for no impression is made upon it by pressure; and it is farther distinguished from it by its weight, being much heavier than any tumour of equal magnitude containing a fluid.

This swelling of the scrotum bears a greater resemblance to sarcocoele, or a scirrhus testicle, than to any other affection of these parts. It is chiefly distinguished from sarcocoele by being totally free of pain, and from being of an equal smooth surface. The other is not only accompanied with pain, but the swelling is knotty and unequal.

As the fores which occur upon these tumours are very apt to assume a cancerous appearance, and ulcers of a similar aspect being sometimes observed to succeed to buboes, some have been thereby induced to consider cancer as a symptom of this disease. That the matter of Lues Venerea may occasionally produce fores which terminate in cancer will not be disputed; but we are not from this to conclude, either that the matter of the two diseases is the same, or that cancer should be considered as a symptom of syphilis.

Besides the pains resembling rheumatism, which occur in Lues Venerea, and of which we had occasion to speak when treating of nodes and affections of the periosteum, pains of a different kind are apt to take place in the more advanced stages of the disease. They do not remain fixed or permanent, but produce sharp momentary stings, without leaving swelling or any other mark behind them. They are most frequent in the neck, temples, and jaws. In the latter they are often suspected to proceed from carious teeth, when on examination no affection of this kind can be perceived, or if there are any, no relief is obtained from pulling them. A falling out of the teeth has been frequently described as a symptom of Lues Venerea, but I have never met with it excepting where the patient had taken a great deal of mercury, and where it appeared evidently to proceed more from the medicine than from the disease.

One of the most frequent symptoms of the advanced stages of syphilis is atrophy, or a gradual wasting of the body. This is no doubt a frequent effect of a mercurial course, particularly when too much of the medicine has been exhibited; but it is also a symptom of the disease. Even where little or no mercury has been given I have known a patient become much emaciated in the course of a short time. From a state of obesity, and with a healthy, florid complexion, a person will in some instances become suddenly lean, while his face will be wan or fallow, as if the vessels were altogether deprived of red blood. This I consider as one of the most fatal symptoms of the disease, from which, in the course of my observation few or none have ever recovered.

Irritability and restlessness are two symptoms of this disease. When Lues Venerea has been of long duration the system becomes so irritable that the most trifling occurrences prove distressful. No application can be given to business; the patient becomes fretful and uneasy, and his nights are spent in watching.

The constant anxiety which takes place here is often connected with that state of atrophy which we have just described. It seems in some cases indeed to be the cause of it. Being always accompanied with an entire loss of appetite this of itself soon reduces the body to the most emaciated state.

But the most universal symptom of the anomalous kind which prevails in Lues Venerea is fever. Nor is it confined to one stage of the disease. Occasionally it takes place in all of them. It is necessary, however, to remark, that fever which occurs in the commencement of the disease is very different from that which most frequently prevails afterwards. The first may more properly be considered as symptomatic, being always connected with some local affection, such as bubo, sore throat, ulcer, or node, while the other often takes place where no other mark of the disease can be discovered. The one therefore subsides along with the particular cause by which it was produced, while the other continues obstinate as long as the virus of the disease remains in the constitution. It is this last, therefore, which is of most importance, and merits most of our attention.

This fever is always of the hectic kind, and accompanied with some colliquitive symptom, particularly with nocturnal sweats. Hence the patient soon becomes emaciated, but a peculiarity occurs here not met with in other fevers; at the same time that the patient becomes languid and reduced he is commonly able to transact his ordinary business, and often continues to do so for a considerable time after the fever has taken place. He is liable to alternate fits of cold and heat; particularly to much warmth over the whole body in the evening; to restlessness and anxiety during the night, and to a constant quickness of pulse; but these symptoms, while they do not come to any great height, do not excite much alarm, and the patient, while no local affection takes place, continues daily in hopes of getting free of them.

For a considerable time both the patient and practitioner find it difficult to account for these symptoms. They are often attributed to cold; in some cases to an incipient pthisis; and in others to scrophula. Remedies for one, or perhaps for all of these diseases, are accordingly prescribed, and no advantage being derived from them, the real cause of the fever either is not discovered, or at last the disease breaks out in some such obvious form as leaves no cause for doubt.

Among other reasons of this uncertainty may be mentioned an opinion which much pains has been taken to inculcate, and which of late has unhappily begun to prevail among those who have not had sufficient opportunities of being enabled to judge for themselves. It has been with much confidence asserted, that the matter of Lues Venerea cannot exist in the system, so as to induce any symptom of disease; without shewing itself upon the surface of the body, or in some such manner as to be at once clear and evident. We shall soon have occasion to enter more fully upon the consideration of this question, but at present I may observe, that the opinion to which I allude, although supported with some ingenuity, appears to be altogether void of foundation, being directly contrary to the observation of all practitioners of experience; for I hold it as a certainty that this matter of Lues Venerea often exists in the constitution for a great length of time, and is productive of fever, as well as a variety of other symptoms, where no local affection ever ensues. It may happen where no mercury has been employed; but we meet with it most frequently where this medicine has been used, but not in sufficient quantities for effecting a total removal of the virus; where it therefore remains in the system, and after lurking there for a longer or shorter period, according to circumstances, either breaks out early in an obvious manner, or before doing so excites fever or some other anomalous symptom of a still less suspicious nature.

In all such cases of doubt and uncertainty we must be directed entirely by the history of the rise and progress of the complaint, and by our own observation in affections of a similar nature.

## S E C T. III.

*Of the Venereal Virus.*

HAVING in the different parts of the preceding section given a description of the various symptoms of this disease, I shall now offer a few remarks upon the virus by which they are produced.

Of the real nature of the venereal virus no correct knowledge is obtained; and as it can never be procured in a simple state we can scarcely expect that much satisfaction would result from any enquiries that could be made concerning it. We meet with it most frequently mixed with pus or mucus, and sometimes with blood and serum; but so intimately is it blended with these fluids, and so little are we acquainted with the peculiar appearances of this matter, that we are not able to distinguish it. By some the matter of Lues Venerea has been supposed to be of an acid nature; others consider it as alkali. One set of practitioners have said that it is of putrescent quality, while others assert the reverse. It is evident, however, that all such opinions must be merely hypothetical, so long as the matter to be investigated cannot be made obvious to the senses in an uncombined state.

But although there may be some circumstances relative to the matter of syphilis which we may never be able to explain, there are others which we can trace with some precision, and upon which I now mean to make a few observations. The circumstances to which I shall advert resolve themselves into the following questions: Upon what parts does the matter of syphilis chiefly act in producing Lues Venerea? When received into the system can the poison remain there without producing the disease? And is it possible for a person with the virus in a latent state, and without any mark of disease, to communicate the infection to others?

Various opinions have prevailed upon the manner in which the matter of diseases enters the constitution. Some contend that it is taken up solely upon the surface of the body ; others that it enters perhaps entirely by the lungs ; while some are of opinion that a great proportion of diseases take their origin in the stomach and alimentary canal. But the point upon which pathological writers have chiefly differed is, Whether the matter of disease, when it has once entered the system, acts most particularly upon the solids or fluids ?

The humoural pathology, as it is called, prevailed universally for a great length of time. Diseases were supposed to be seated chiefly, if not entirely, in the fluids ; and so generally was this opinion received, that although others were occasionally proposed, they were considered only as innovations, and for the most part soon fell to the ground.

Of late, however, the opposite doctrine has begun to be more generally received, and it has become fashionable to explain the phenomena of every disease, and the operation of almost every medicine employed for curing them, by their influence upon the solids. To me it appears that both opinions have been carried too far ; and while one party have supported one opinion, and the other the very reverse, that it is probable no disease of the constitution can take place without every part of the system being affected. I think it evident, however, that every disease produced by contagion acts first upon the fluids, and that the solids are ultimately affected in a secondary way only.

In Lues Venerea this appears to be still more clearly the case than can be demonstrated in almost any other disease ; a circumstance, however, that tends to support the general principle of the doctrine, even where this kind of proof cannot be obtained ; for if it obviously happens in one disease where the matter of infection can be clearly shown to affect the fluids in the first instance, we have reason from analogy to conclude that it may likewise be so in others, al-

though it may not from a concurrence of circumstances be in our power to show it.

To enter fully upon the consideration of this doctrine, a greater length of discussion would be required than the nature of this work will admit. I shall therefore only mention shortly such circumstances as tend most clearly to establish the opinion which I adopt; and even this might have been unnecessary if there was not reason to suppose that much inconsistent practice would be the consequence of that opinion being admitted, which of late a great deal of pains has been taken to establish.

Whatever may be the case in other diseases, that the fluids are chiefly affected in Lues Venerea is rendered evident by the following circumstances.

1. The contagious matter of this disease is always communicated in a fluid form. But it is alleged, although this is the case, that even upon its first application it shows a tendency to act chiefly upon the solids, by exciting inflammation wherever it is applied. This appears, however, to be only an accidental, not an essential property of the matter; for instances are frequent, as we have already had occasion to remark, in which it enters the system without inducing either inflammation or erosion. By the acrimony which the matter seems to possess inflammation most frequently takes place on the spot to which it is applied, by which the corresponding absorbents are with more certainty made to receive it than might otherwise be the case; but no other conclusion can be drawn from this. It happens here, as we have already had occasion to remark on the practice of inoculating for the small pox, that the matter of infection does not readily enter the system where inflammation is not excited; but surely few will suppose that we would fail in producing either of these diseases, were we possessed of any method of introducing the matter to the common course of circulation without exciting inflammation. Even this, however, has been alleged by some; but besides other circumstances which might be mentioned as proofs

of the contrary, the clearest evidence of it is obtained, and of inflammation not being essentially necessary for the production of small pox, from the manner in which the natural form of the disease usually appears, where no inflammation, or any other local affection is perceived, till the disease has taken place, when the first effects that occur from it are, fever, and quantities of matter thrown out upon the surface. This takes place in a more obvious manner in small pox, but it also happens in Lues Venerea, in which a great proportion of the symptoms are evidently produced by contagious matter of a similar nature to that which first entered the lymphatics at the time of infection, for the matter produced by venereal ulcers and eruptions will very certainly produce every symptom of the disease, if by any means it is thrown into the system of a sound person. Of this every practitioner, I presume, is so much convinced, that even those who have thought proper in theory to support a contrary opinion would not willingly expose themselves to the hazard of being infected with matter of this kind.

2. It has been a question agitated with some warmth, in what manner does the virus act on being conveyed to the mass of blood? At one period fermentation was considered as a principal agent in producing disease. The matter of infection being received into the circulation, it was supposed by means of fermentation to possess a power of converting the whole fluids of the body into its own nature. This opinion, however, was liable to various objections, and particularly to this, that it is difficult to conceive how fermentation can go on in fluids in circulation. In a state of extravasation we can easily suppose that it may happen; but while life subsists the fluids are kept in such perpetual motion that we cannot easily conceive how such a process can take place. But although fermentation, in the strict acceptation of the word, may not occur, from this cause, I think it highly probable that the virus of

all contagious diseases, and more especially the matter of Lues Venerea, has a power of assimilating to its own nature a certain portion, and ultimately, perhaps, the whole fluids of the body.

3. This power may be quick or slow in its progress according to a variety of circumstances, but which, from our limited knowledge of the laws of the animal economy, it may never be in our power to ascertain.

4. While the quantity of matter thus assimilated is inconsiderable no marks of disease will be produced, nor will any effects result from it till it prevails in such quantity as to be capable of exciting some degree of morbid irritability in the living principle.

5. From all this I conceive that in Lues Venerea the matter of contagion acts in the first instance upon the fluids, and that the solids are not otherwise affected, than in being excited by this morbid state of the fluids to some degree of unusual exertion for the purpose of throwing them off, by which eruptions on the skin are produced, with ulcers of different parts, as well as all the other symptoms of the disease.

6. From this view of the origin of Lues Venerea we account for the matter of contagion remaining longer inactive in some instances than in others. Besides any difference which may take place in the state of the fluids upon which the matter has to act, and by which the assimilation to which we allude may be accelerated or retarded, the different degrees of irritability which prevails in different persons, and even in the same person at different times, will also co-operate in producing an early or latter formation of the symptoms; for while some are easily stimulated, and may therefore be acted upon almost as soon as the matter of contagion enters the system, others of more sluggish temperaments may, for the production of the same effect, require the matter to be accumulated in such quantities as nothing but a great length of time can accomplish.

7. It may be said in opposition to this opinion, that as soon as this accumulated state of morbid matter is accomplished the effects of it should appear equally upon every part of the body; for the fluids circulating over the whole, the effects of any disease to which they are liable should not

be confined to particular parts, as we find to be the case in Lues Venerea. To this it may be answered, that many inexplicable circumstances occur in every disease, and that in this respect the venereal disease is not different from a variety of others in which particular parts are more apt to be affected than others, and where it is equally difficult to explain why they should be so. Thus it is as impossible to say, why the matter of gout should fix most frequently upon the great toe as it is to explain the cause of the throat and nose being particularly apt to suffer in Lues Venerea. There may be some kind of attraction between particular parts and the matter of certain diseases; or these parts may be more easily irritated than others, and which ever of these may be the case the same consequences will ensue.

8. It is asserted by those who support the contrary opinion, that we cannot in any instance discover the cause of disease to be in the fluids. This indeed they are under the necessity of doing in order to give the appearance of probability to their theory in any case. By discovering therefore, that this assertion is ill-founded, and that in other instances the fluids are obviously affected, we might from analogy say, that they are so in Lues Venerea, were the proofs which we have adduced of it less evident than we have shown them to be. Now the action of several other poisons is rendered evident to the senses. This is particularly the case with the poison of different kinds of vipers, in which serious effusions take place in different parts of the body, often in the course of a few hours from the time of the bite being inflicted, and in which the colour of the whole serum of the blood is even in that short space of time tinged of a morbid yellow colour.

9. They who are of opinion that the cause of disease is not seated in the fluids are under the necessity of denying in more instances than one, what in Lues Venerea is well known to be matter of fact. They are obliged to say that the blood is perfectly sound, and that neither this fluid, nor any of the secretions produced from it are capable of communicating infection. A theory being once formed, every argument that militates against it is apt to be overlooked, while, in order to support it, facts are explained a-

way in a manner which they will not bear. This, in some instances, may be followed by very pernicious consequences, particularly where such modes of reasoning are adopted and promulgated by authors of ingenuity and reputation; and as Mr. Hunter of London has gone farther than any other author in support of the opinion that the syphilitic virus cannot be conveyed by or affect the fluids, the following observations will relate particularly to his work\*.

“We may observe (says Mr. Hunter) that even the blood of a pocky person has no power of contaminating, and is not capable of giving the disease to another even by inoculation; for if it were capable of irritating a sound sore to a venereal inflammation, no person that had this matter circulating, or had the *Lues Venerea*, could escape having a venereal sore, whenever he is bled, or receives a scratch with a pin, the part so wounded turning into a chancre, &c.” Vide p. 292. Now Mr. Hunter here assumes as matter of fact what is not the case; for although all wounds inflicted upon patients labouring under *Lues Venerea* do not become venereal ulcers, yet frequently, and in almost every instance of the more advanced state of the disease they do so. I have at this time a gentleman under my care whose case affords an instance of this, where the bites of leeches applied to the scrotum on account of inflammation of one of the testes, the consequence of Gonorrhœa, degenerated into venereal sores. This I informed him would not have happened from Gonorrhœa alone. And upon enquiry he acknowledged that six months ago he laboured under chancres and bubo, for which he suspected that he had not used enough of mercury, and that for a week past he had felt uneasiness in his throat, where I found, on inspection, that an ulcer had already formed on one of the tonsils.

In the course of business I have met with a variety of similar cases, and every practitioner must have done so. It must be remarked, however, that we have seldom occasion to take blood, either with the lancet or leeches, in symptoms truly venereal. It is in Gonorrhœa chiefly that this remedy becomes necessary; a circumstance, I may observe, that affords a farther proof of the difference of the

\* Vide a quarto edition, published in 1786.

two diseases; for while the symptoms in Gonorrhœa are often so acute, and the inflammation so violent, as to render it necessary to discharge a good deal of blood, this almost never happens in Lues Venerea, a disease in which the parts affected become red and of a copper-colour, accompanied with some degree of uneasiness, but in which that kind of inflammation requiring blood-letting scarcely ever takes place.

Mr. Hunter was resolved, however, not to rest satisfied with asserting that the blood of a venereal patient could not communicate infection. In the same page, viz. 292, he even says, that the matter produced by such ulcers as occur in Lues Venerea is not venereal, and that it will not produce the disease. That there may be no suspicion of mistake on my part, I shall transcribe his words. "When the matter has got into the constitution it from thence produces many local effects on different parts of the body, which are in general a kind of inflammation, or at least an increased action, occasioning a suppuration of its own kind; it is supposed that the matter produced in consequence of these inflammations, similar to the matter from a Gonorrhœa or chancre, is also venereal and poisonous. This I believe till now has never been denied, and upon the first view of the subject, one would be inclined to suppose that it really should be venereal; for first the venereal matter is the cause; and again the same treatment cures both diseases; thus mercury cures both a chancre and Lues Venerea; however, this is no decisive proof, as mercury cures many diseases besides the venereal. On the other hand, there are many strong reasons for believing that the matter is not venereal. There is one curious fact, which shows it is either not venereal, or if it be, that it is not capable of acting in some respects on the body or same state of constitution, as that matter does which is produced from a chancre or Gonorrhœa. The pus from these latter, when absorbed, generally produces a bubo, as has been described, but we never find a bubo from the absorption of matter from a pocky sore; for instance, when there is a venereal ulcer in the throat we have no buboes in the glands of the neck; when there are venereal sores on the arms, or even suppurating nodes on the ulna, there are no swellings of

the glands of the arm pit, although such will take place if fresh venereal matter is applied to a common sore on the arm, hand, or fingers, &c."

Now all this is such loose reasoning as could not have been looked for in a man of Mr. Hunter's experience and observation. His overlooking every argument militating against his favourite theory can alone account for it. If the fact be not general no dependence can be placed upon it. If it be general it is not curious: neither is it the case that the matter of chancres and Gonorrhœa generally produces buboes. The matter of chancres often does, but it much more frequently does not; and few practitioners, I believe, will say that buboes are frequent consequences of Gonorrhœa.

I cannot say what may have been the result of Mr. Hunter's experience, but I have met with many instances of buboes, or swelled glands, in the thigh, axilla, and neck, as obviously produced by sores in the feet, legs, hands, and throat, as buboes commonly are in the groin from chancres on the penis. But admitting that the occurrence is not frequent, still this is no reason for supposing that the matter of these sores is not venereal. If the matter be not absorbed no more harm will ensue from it than if it had never been formed; and in section II. of this chapter I have shown that it is not so frequently absorbed as the matter of chancres. The reason of this I have also endeavoured to explain, by shewing, that some degree of irritation is required for the purpose of exciting the absorbents to action; and as the matter of Lues Venerea seems to possess very little power of exciting irritation, excepting such as is produced by the primary sores of the disease, it is accordingly seldom absorbed, and still less frequently does it produce buboes; for being of a mild nature it does not so readily stimulate the lymphatics, so as to produce obstructions in the glands as it goes along.

Mr. Hunter would have found it difficult, or even impossible, to explain consistently with his theory of the disease, a number of circumstances which we daily observe. He therefore denies that they exist; and he seems to have no difficulty in doing so, even where they are admitted by all unbiassed practitioners. In page 291, he says, "It is also

supposed that a foetus in the womb of a pocky mother may be infected, and have the disease from her, as it were naturally interwoven with it. This I should doubt very much, &c." And in page 295, he says, "It has been supposed, and asserted from observation, that ulcers in the mouths of children from a constitutional disease, which constitutional disease was supposed to be derived from the parent, produced the same disease upon the nipples of women who had been sucked by them, giving it as it were at the third hand; that is, the children were contaminated either by their mother's or father's having the disease in form of a *Lues Venerea*, of which I have endeavoured to shew the impossibility."

Mr. Hunter has certainly endeavoured to shew the impossibility of this, for his system could not otherwise have had the least plausible appearance; but none, excepting such as have not had opportunities of being able to form judgments for themselves, will say that he has proved successful. If I can give credit to any fact with which I am acquainted I must believe in this, that children may receive, and frequently do receive the venereal disease from their parents labouring under it in a constitutional form; and that ulcers in the mouths of these children will, and frequently do produce the same disease upon the nipples of women whom they suck. Nay, that these will give it again to other children, and these children to other nurses; circumstances which I have so frequently witnessed, so strongly marked, and followed by consequences so distressful to innocent sufferers, that I cannot help expressing astonishment that a practitioner of any experience should entertain a doubt of their existence.

Mr. Hunter, in page 296, proceeds to say, with some appearance of exultation, as judging it to be an unanswerable argument, that "were it possible to contaminate once in this way it would be possible to contaminate for ever;" a circumstance which he seems to consider as ridiculous: But surely all this would happen. Nurses and children infected in this manner would undoubtedly continue to communicate the contagion to others as long as they were not cured of the disease. Nor would there be any thing in

all this that does not daily happen ; and in whatever way the disease is communicated we have reason to think that it would be the case.

In order I suppose to convince others that he himself at least is convinced of the opinion which he supports being well founded, Mr. Hunter, in p. 12, goes even farther than any thing I have yet mentioned : That the venereal disease is to be propagated only by matter is proved every day, he says, by a thousand instances. And in the belief of this being the case he afterwards observes, that he has gone so far as to allow married men who had contracted the disease to cohabit with their wives, in order to save appearances, and always with safety : Nay, that he could carry this still farther, and allow a married man who has a Gonorrhœa to have connection with a sound woman, if he took care to have all the parts cleared of matter, by syringing the urethra, making water, and washing the glans.

I believe with Mr. Hunter, and every practitioner perhaps will do so, that the risk of communicating infection will not be so considerable where no matter is formed as where ulceration actually takes place : but I also know, that a woman would run much risk of being injured by cohabiting with a man whose blood was infected with matter of syphilis, although no local marks of it should appear, for I have met with various instances of it ; and I also know from a variety of facts, that both father and mother, in situations such as this, and where no bad symptoms were ever perceived, have communicated the disease to the fœtus. Where this has happened from the mother being infected, the matter of contagion must pass from the mother to the child along with the blood ; but where it takes place from the father, as is most frequently the case, there is no other mode by which it can be conveyed but by the semen. We shall have occasion, however, to make some farther observations upon this subject when treating of Lues Venerea in new-born infants.

From all that I have said, I think it will appear that the matter of contagion in Lues Venerea, in the first place, acts upon the blood alone ; that by accumulation it comes to irritate the solids or con-

taining parts, and in this manner that effusions and consequent ulcerations are produced ; that the venereal poison may remain long latent in the system ; that this will depend upon the irritability of the person, as well as upon the particular state of the fluids at the time, by which they may be more or less liable to the assimilating effects of the matter of contagion ; and lastly, that there is no cause of doubt that a person with the virus in this latent state, and without any external mark of disease, will communicate the infection to others.

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## S E C T. IV.

*Of the Remedies used in Lues Venerea.*§ 1. *General Observations.*

AS no disease has engaged more of the attention of practitioners than Lues Venerea, so there are perhaps none in which more remedies have been employed. Towards the end of the fifteenth century, when the first accurate description was given of this disease, a great variety of remedies was proposed for it ; and as it daily increased in violence till the use of mercury was introduced, scarcely an article in the materia medica was left untried in the short space which elapsed between this period and the fortunate discovery of this powerful antidote.

Even long subsequent to this many new remedies were brought forth ; for while mercury seldom fails of curing the disease, it was soon found to be productive of many inconveniences. Every country has accordingly been ransacked, but after all the researches that have been made, the number of articles employed in modern practice for the cure of this

disease is very few ; and it is these only which I now mean to mention. The others, having been found either altogether inefficacious, or comparatively of weak powers to those which are retained, have necessarily fallen into disuse, so that now it would be considered as superfluous to speak of them.

The only antisiphilitic medicines now in general use are mercury, guaicum, sarsaparilla, meiereon, and opium : Of each of which I shall speak separately.

## § 2. Of Mercury.

### I. General Observations upon Mercury.

Mercury having been long employed for the cure of a great variety of herpetic affections, we are not surprised at finding it early introduced in the treatment of Lues Venerea, in which the most obvious of the symptoms chiefly affects the integuments of the body. Besides, as it was universally known to be one of the most active medicines that had ever been made use of, we can easily suppose that practitioners would soon be induced to employ it for the removal of a disease which resisted the effects of every other Remedy.

Mercury in its crude state is found to be nearly inert, or not capable of producing any active effect, inasmuch that it may be taken into the stomach in very considerable quantities. It has been swallowed to the extent of several pounds weight, and repeated daily for two or three weeks together with scarcely any effect being perceived from it ; so that wherever it has proved active when used in this state as in a few instances has happened, it must probably have been in consequence of its meeting with some unusual degree of acidity in the stomach or intestines.

This inactivity of mercury in a crude state seems to depend entirely upon its insolubility in the fluids which it usually meets with in the human body. In

this state it either is not absorbed, or if absorbed, by not being soluble it remains inert.

I shall afterwards point out the different means employed for rendering mercury active, and for introducing it into the system, but previous to this it will be proper to offer a few observations upon the ordinary effects of mercury, and upon the different opinions which have prevailed respecting its mode of action in curing the venereal disease.

## II. *Of the Effects of Mercury upon the Human Body.*

One of the most certain effects of mercury is, that it acts as a cure for the venereal disease. It so seldom fails indeed, that when it happens not to succeed, as occasionally is the case, we are apt to suppose that this proceeds either from the medicine not having been properly administered; from its not having been given in sufficient quantity; or from the complaints for which it is used not being altogether venereal.

Besides this, mercury is perhaps one of the most universal stimulants with which we are acquainted. Even in small quantities it often excites heat over the whole body, quickness of pulse, and other symptoms of fever.

It is also a very powerful evacuant. Other medicines act with equal certainty upon particular organs, of which we have examples in the effect of ipecacuan upon the stomach, and of jalap, aloes, and other purgatives upon the intestines; but we know of none which so generally affects all the secretions. Almost all preparations of mercury will act as purgatives. They also produce sickness, nausea, and vomiting. They often excite an increased discharge of urine; and few medicines operate with more certainty upon the skin, for they can scarcely be employed without being productive of some degree of diaphoresis.

The most remarkable effect, however, which we perceive from mercury is an increased discharge of saliva; and it is perhaps the only medicine which

from internal exhibition is known to act with any certainty upon this secretion. It first excites some degree of fœtor in the breath, which is often accompanied with a gentle nausea, and very commonly with the taste of copper. The gums become red, full, and somewhat tender. The salivary glands become hard and turgid, and at last an increased flow of saliva takes place, accompanied with a good deal of pain in chewing; and with a loose vacillating state of the teeth. For the most part this increased quantity of saliva bears some proportion to the quantity of mercury that has been exhibited; but this does not always happen, for occasionally we meet with cases in which a very great and long continued discharge of saliva is excited by the smallest dose of mercury that is usually given.

In such instances, if the farther exhibition of the medicine be not managed with much caution, besides a great flow of saliva, and swelling of the salivary glands, a very distressful tumefaction takes place over all the contiguous parts, and particularly of the tongue and fauces. This also happens wherever mercury is given in too great quantities, and especially if the patient is suddenly and unexpectedly exposed to cold or dampness. Where this takes place to any considerable degree the whole surface of the mouth over all the inside of the cheeks, the tongue, uvula, and gums, are apt to ulcerate, and the matter which ensues from mixing with the saliva gives it both an additional fœtor and an ugly, sanious appearance.

Besides the usual symptoms of fever mercury is apt to excite restlessness, anxiety, general debility, and a very distressful irritable state of the whole system.

These are the ordinary effects of mercury, and we shall presently have occasion to see that in the treatment of Lues Venerea one of the greatest difficulties we meet with is the management of this medicine; for while the cure of the disease often requires it to be given in considerable quantities, the constitution is apt to be materially injured if it be not exhibited with the greatest care and attention.

### III. *Of the Operation of Mercury in the Cure of Lues Venerea.*

Various opinions have been offered of the action of mercury in the cure of this disease. It would be foreign to our purpose, however, to enter minutely into the consideration of any of them. I mean therefore to make only a few observations upon such as have been most generally received, and chiefly upon that which in my opinion ought to be adopted.

1. Some have imagined that mercury acts chiefly in the cure of Lues Venerea by exciting a dissolvod or putrid state of the fluids, which they conceive to be a state favourable for the peccant or morbid matter of the disease being thrown off from the system.

The chief foundation of this opinion is the fœtor which we commonly perceive in the breath of patients under a course of mercury, and the increase with which it is usually attended of almost all the secretions.

When we find, however, that whatever excites a quickened state of the circulation is commonly productive of an increase to all the secretions, and knowing that a quickness of pulse is a very common effect of mercury, we conclude, that upon this principle this effect of the medicine is more clearly explained than by any other opinion that has yet been suggested. Besides, we know from actual observation that the blood, during a considerable part of a course of mercury, instead of being thin and dissolved, is of a more firm texture than it usually is in health. Mercury, when long continued indeed, never fails to excite much languor and debility, with many of the corresponding symptoms of a putrescent or scorbutic diathesis; but as many of the symptoms of syphilis are daily cured without this taking place, there is reason to suppose that this effect of mercury upon the system is in no way necessary for the cure of the disease.

In confirmation of this we may remark, that all the slighter degrees of Lues Venerea are often removed, and in some instances cured, without even the saliva being increased in quantity or affected with fœtor: nay, a peculi-

arity of constitution sometimes occurs in which we cannot induce either salivation or foetor of breath by all the mercury that we dare venture to give, and still the cure of the disease goes on, although not so speedily, yet with equal certainty as if these ordinary effects of the remedy had been regularly induced.

2. The symptoms of Lues Venerea being considered by some as the effect of a peculiar irritation excited by the presence of the poison in the system, they have also ventured to say that mercury cures the venereal irritation, as they term it, by producing an irritation of a different kind\*.

The reasoning, however, which has been employed in support of this opinion seems to be altogether hypothetical, and directly contrary to many facts which fall daily within our observation in the treatment of this disease.

Local pains may for a time be suspended, or they may even be removed altogether, by irritation of a different kind being excited either in the contiguous or some more distant parts of the body; but we know of no constitutional disease that has hitherto been cured by such means. This affords, therefore, much cause to suppose that the opinion is ill-founded when applied to the action of mercury in the cure of Lues Venerea; for when no such effect is found to take place in other diseases, we cannot, without the strongest proofs were given of it, be led to imagine that any thing so very unusual should take place here. Mr. Hunter indeed gives as the chief reason which he suggests in support of his opinion, that "the disease can in many cases be cured by raising a violent stimulus of another kind."† I must say, however, that I never met with an instance of this, nor have I been able to hear of any who have done so; neither has Mr. Hunter, in treating of the method of cure, mentioned any article for the purpose of curing the disease in this manner.

The opinion seems to have arisen from mercury being known to act as a very powerful stimulant; but although this will be very generally admitted, yet it is also well known that this stimulating effect is not only unnecessary

\* Vide Mr. Hunter's Treatise on the Venereal Disease.

† Vide p. 365.

for the cure of Lues Venerea, but that it is one of the most distressful occurrences that we meet with in the treatment of this disease, and that the more we can counteract it, consistently with the quantity of the medicine to be given, the more certainly do we succeed. So evidently is this the case that it may be considered as one of the principal desiderata in this branch of practice, a means of throwing mercury in an active state into the system, and in sufficient quantity for the speedy cure of the disease without producing these stimulating effects. Were we possessed of this the cure of Lues Venerea would be accomplished with ease, and probably in one half of the time that is now found necessary. With the assistance of anodynes we in some degree counteract the stimulating property of mercury, but the most powerful we can employ, even opium itself, is not altogether sufficient; so that we succeed only by exhibiting the medicine in small quantities, and interrupting the use of it altogether whenever it excites much fever, or proves otherwise so powerfully stimulating as to be productive of much uneasiness.

Another obvious proof may be mentioned of this stimulating property of mercury being in no degree necessary for the cure of Lues Venerea. From time to time we meet with constitutions in which none of the usual effects of mercury are ever produced, and yet even in these it does not fail of curing the disease. We have already had occasion to remark, that in some neither salivation nor fœtor of breath takes place from mercury; but I have also met with many in whom it acts with perfect certainty in the cure of Lues Venerea, although it neither tends to quicken the circulation nor to increase any of the secretions. In all such cases too the cure is accomplished with more ease than where mercury operates in the usual way; and it is worthy of remark, that although all the more acrid preparations of mercury will cure the disease, yet their stimulating properties are found to be so hurtful and unnecessary, that almost by the universal consent of practitioners they are now generally laid aside.

We may farther remark, that if mercury acted in the cure of Lues Venerea by the irritation which it excites, other stimulants ought also to do so; but we have not one

authenticated instance, either of a single stimulant or of any combination of medicines of this class having ever accomplished a cure, and which we cannot suppose would have been the case were the opinion which we are now considering well founded.

3. Mercury being specifically much heavier than any of the fluids of the human body, it was a prevailing idea with many that it operated chiefly in the cure of Lues Venerea by its weight. This opinion, however, seems to be equally ill-founded with the one we have just been considering. It has not been found that other articles of equal or greater ponderosity cure this disease. It is difficult, or even impossible, to conceive that any medicine can prove useful merely from its weight; and we have no instance properly authenticated of mercury having ever been discovered in any of our fluids in a metallic form.

I may also observe, that the real weight of mercury that enters the system in any case of Lues Venerea must, for the most part, be very inconsiderable. Where the more active preparations of it are employed this is particularly the case; but even where triturated mercury is used internally, the form now in common practice, we seldom find it necessary to exceed three or four drachms, and this requiring the space of six, eight, or ten weeks, the quantity in the constitution at any one time must at all times be trifling.

4. The most prevalent opinion upon this question at present is, that mercury cures the disease by the evacuations which it excites. This has been supported by much ingenious argument; and as it is known that mercury seldom exists in the system without producing an increase of one or more of the secretions, we need not wonder at the preference which on a cursory view was given to it. I think, however, that it may be easily shewn that it is not in this manner that mercury acts in the cure of syphilis.

If this opinion were well founded mercury ought to prove useful or otherwise in proportion to the evacuation which it excites. At one period this was generally believed to be the case, and accord-

ingly the greatest degree of salivation that a patient could bear was commonly advised; but now that the treatment of syphilis is better understood, it is universally known that this is not necessary, nay, in many instances that it tends evidently to retard the cure. It happens indeed, as we shall hereafter endeavour to shew, that some of the more inveterate symptoms of Lues Venerea cannot always be cured but with such quantities of mercury as necessarily, in a great proportion of cases, produce salivation to a considerable height. But we judge that this is merely an accidental property of the medicine, and not necessarily connected with the cure of the disease, from our being able to remove all the slighter degrees of it without exciting salivation, and from cures being in some constitutions obtained even of the most inveterate symptoms, without either the teeth, gums, or breath being affected.

Neither does it appear that the power of mercury in promoting any of the other secretions is in any degree useful in the cure of Lues Venerea; at least instances frequently occur in which cures are accomplished without any sensible evacuation taking place. Nay, I have had evident proofs of a cure being retarded by mercury going too freely off by perspiration; and we daily meet with instances of this where it affects the bowels so as to excite diarrhoea.

If mercury acted in the cure of syphilis by increasing the secretions other evacuants ought occasionally to cure it. But no instance of this has happened, while we cannot doubt but that it must have been frequently perceived if any advantage had ever been derived from them. The necessity of promoting one or other of the secretions for the cure of other diseases is so frequent, and Lues Venerea so often takes place along with other complaints, that every doubt would long ago have been removed. If the opinion which we are now considering had been well founded every practitioner must have observed instances of the disease being cured by diaphoretics, diuretics, &c. but none will probably assert that they have done so,

We might, *a priori*, suppose, that syphilis cannot be cured by evacuants, but we know from experience that it is so, and that they do not even afford relief in any of the symptoms. We can easily conceive how those diseases that originate from affections of the solids, particularly such as are produced by spasm, or stricture upon the surface, may be much alleviated, or even altogether removed, by the operation of diaphoretics. By removing the cause the effect will commonly soon cease. But where the symptoms are induced by contagion in the general mass of blood, and where this contagion has a power of propagating itself, as we have shewn to be the case in Lues Venerea, it does not appear how they are to be removed by any evacuations. By the use of diaphoretics and other evacuants the quantity of fluids in the system will no doubt be lessened, but this will not alter the nature of those that remain: If they were diseased before they will still continue so; for it is not alleged that medicines of this nature have the power of discharging those parts of the blood that are diseased and leaving such only as are sound, and yet this would necessarily be the case if the venereal disease could be cured by evacuants.

5. Of all the opinions that have yet been advanced concerning the operation of mercury in the cure of Lues Venerea, that which supposes it to act as an antidote is liable to the least difficulty. This was long ago very universally admitted, nor was much doubt ever entertained of it, till attempts were made by theoretical writers to account for every disease, and for the operation of every medicine, upon such general principles as are not often applicable in practice. Where principles of this kind are clear and evident they ought certainly to be adopted, but the surest method of having them overlooked in every case is to attempt to introduce them in all. By doing so absurdities must often be admitted which tend to invalidate the whole, and by which many are led to throw aside reasoning in all cases, who willingly would go into it if our systems of theory were con-

finned to such questions as it is in our power to explain.

Writers of this class deny the antidotal power of every medicine merely from their not being able to account for the manner in which they act. They do not consider that many of the most common operations in chemistry are equally inexplicable. Thus no person can say why or in what manner the properties of an alkali should instantly be destroyed by an acid brought into contact with it. I do not say that the operation of mercury in the cure of syphilis is analogous to this; but the one I think is equally incomprehensible with the other, and that mercury acts in this disease consistently with the idea which we affix to an antidote is at least highly probable. What I conceive to be the property of an antidote, is, that when it comes in contact with the poison for which it is appropriated, it either renders it altogether inert or so far changes its nature that no deleterious effects are produced by it. Now it so happens that we can bring more decisive proofs of this being the effect of mercury in the cure of Lues Venerea, than we might at first imagine would be in our power in accounting for the action of any medicine in the cure of any disease. Among other circumstances which tend to establish this the following may be enumerated.

1st, We know by experiment that the matter of Lues Venerea on being mixed with the triturated mercury is rendered inert, and will not produce the disease. The fact is recorded by the best authority, the late Doctor Cullen, who having supported more ably perhaps than any other person an opposite opinion, we are not to suppose that he would have given room to what militated so strongly against it if he had not been convinced of the fact being well founded. His words are, "A physician took a quantity of matter from a venereal chancre, and mixing it with a quantity of Plenck's gummy solution of mercury, he applied this mixture to a sound person, but could not find that it produced either chancre or any other syphilitic

symptom."\* This fact of itself might be judged to be decisive, but more complete conviction is obtained of its being so from every view that we can take of the chief phenomena observed to occur from the operation of mercury in the cure of this disease.

2dly, We have daily evidence of mercury curing venereal sores not merely by acting upon the disease in the constitution, but on being locally applied to chancres and other ulcers.

In answer to this it is said that these sores may be cured by other articles besides mercury. Allowing this to be the case, it is sufficient for our purpose that they are more certainly and more speedily cured by mercurial applications than by any others; a fact so notorious, that mercury in one form or other is now the chief dressing for chancres all over Europe. Copper has been much extolled for this purpose, but although I have used it in every variety of form it has never proved equal to the different preparations of mercury.

It is also said that mercury does not always cure venereal ulcers, which it ought we are told, to do, if it acted as an antidote. This kind of cavil, however, requires no serious answer. We may regret that our medicines will not cure every disease, but all will allow that we are more certain of curing Lues Venerea with mercury than of removing any other disease by any remedy whatever.

3dly, Besides these local effects of mercury upon the matter of Lues Venerea we have the clearest proofs that can be wished for of its acting as an antidote to the virus through the whole progress of the disease. Nay, the very practice of those who combat this opinion tends to evince it, although they do not seem to be sensible of its doing so. The first symptom of the disease that commonly succeeds to chancre is bubo, produced, as is now universally known, by the venereal virus being absorbed and lodged in a lymphatic gland. Now it is acknowledged by all who have paid attention to the subject, that our best practice here is to bring the mercury we mean to employ as quickly as possible into contact with the virus lodged in the obstructed

\* Vide a Treatise on the Materia Medica by the late Doctor William Cullen. Vol. II. p. 448.

gland. Nay, of so much importance is it that this should be done, that although we may prevent the *system* from suffering, by throwing the medicine in a different manner; yet no other practice will prevent the virus from continuing to irritate the obstructed gland till it is at last thrown out by a complete formation of matter. Now in what manner does the mercury act here? It cannot be by dissolving the texture of the blood, for we have already shewn that this does not happen if it be not from a course of mercury being long continued, while buboes are often removed by a very short application of it. It cannot be by its weight, for a few grains of it often proves sufficient; and besides, it would have in most instances to act contrary to its own gravity. It is not by exciting irritation, under any kind of modification, for when mercury succeeds in resolving these tumours, the pain produced by the first formation of them very quickly subsides, while no irritation of any other kind ever succeeds to it. Neither does it act by exciting evacuation; nor could evacuations of any kind be of any avail. The disease is here in a local state: In the formation of bubo the matter does not necessarily enter the system, so that there is nothing to carry off. I therefore think we may fairly conclude that as the action of mercury in the cure of buboes cannot be accounted for in any other manner, and as we find from the testimony of all practitioners that it has no influence in resolving them, but when brought into direct contact with the venereal virus, that it proves effectual only by acting as an antidote to the virus. In my opinion this affords the clearest proof of its doing so that can possibly be given. It even removes the objection that has been stated to the antidotal power which we suppose mercury to exert in the cure of chancres, where it is said that these sores can be cured by other applications; for in the treatment of buboes no practitioner has ever ventured to suppose that they can be resolved by the absorption of any other remedy but mercury.

4thly, In tracing the effect of mercury upon the venereal virus still farther we have all along the clearest evidence of its acting as an antidote. In the treatment of many of the symptoms of syphilis, almost as soon as we can

suppose the mercury to have entered the system, the same kind of relief is obtained which we experience from this remedy when it proves successful in resolving buboes. This is particularly the case in the venereal sore throat, where a good deal of uneasiness generally prevails till mercury is given, and in which much relief is commonly obtained soon after it is employed, without any other irritation being excited, and often before the medicine has produced any evacuation whatever.

5thly, We conclude that the relief experienced from the internal use of mercury in the treatment of local venereal symptoms proceeds from the medicine coming in contact with the virus, in the first place, from our finding, as I have just observed, that it is analogous to what happens in the cure of buboes, where we know that the mercury is directly applied to the virus; and secondly, from our having convincing proofs of the medicine entering the circulation almost in every case in which it proves successful, and therefore that it must be applied to every part that is diseased. Some indeed have alleged that mercury never enters the circulation. In a metallic form this may perhaps be the case, but that the essential parts of it pass into the system is obvious, not merely from its influence in curing diseases, but from the taste which it gives to the saliva, although it be absorbed at a distant part of the body; and from the effect produced by the exhalation of a person under mercury upon gold and silver carried in the pocket, which is exactly similar to that which occurs from mercury being rubbed upon these metals.

6thly, It has been stated as an objection to this opinion, that the quantity of mercury employed for the cure of Lues Venerea is so small that it is difficult to conceive how it can have any influence upon the general mass of blood, to which it bears such a small proportion. To obviate this difficulty an ingenious opinion has been offered. As we perceive the venereal virus to produce effects chiefly upon particular parts, it is supposed that all that exists of it in the mass of blood may be thrown out upon or be attracted by these parts, and therefore that the mercury employed in the cure, instead of acting upon the general mass of

blood, may be supposed to exert all its influence upon the diseased parts only.\*

I think it more probable, however, from many of the phenomena of the disease, and it must undoubtedly be so if the opinion I have endeavoured to support be well founded, that the whole mass of blood is tainted in an equal degree while any part of the contagion remain in the constitution, and that the mercury employed in the cure acts equally upon every part of it. We know that the disease itself may be produced by a very small particle of matter. We may just as readily suppose therefore that it may be cured by a small quantity of any remedy that acts as its antidote; and it is perhaps equally difficult to explain the manner in which such a small portion of matter acts in assimilating quickly to its own nature such a large proportion of our fluids, as it is to account for the manner in which the mercury operates which we employ for curing the symptoms produced by it.

Upon the whole, therefore, as the action of mercury in the cure of Lues Venerea is not accounted for by any other opinion that has yet been offered; as we have complete evidence of this disease being at all times the effect of contagious matter entering the blood; as the local effects of this matter are cured by mercury, whether they appear in the form of ulcers or by obstructing the lymphatic glands; as no other remedy hitherto employed operates with any certainty, either in removing the matter from the blood, or in obviating the effects of it; as mercury seldom or never fails in curing syphilis, when it can be made to enter the blood, if it be not in the most advanced stages of the disease, or when Lues Venerea is connected with other diseases, or with such peculiarities of constitution as will not bear a sufficient quantity of mercury; and as no instance perhaps can be adduced of a cure being accomplished where the presence of mercury in the blood was not rendered obvious either by the usual effects of it upon the mouth or upon gold and silver carried in the pocket, we have no reason to doubt of this remedy operating perhaps

\* Vide Observations on Mercury, by Dr. Andrew Dunean, professor of medicine in the university of Edinburgh.

entirely as an antidote ; that is, by rendering the matter of contagion inert or incapable either of exciting the disease, or continuing the symptoms even after the disease has been produced.

#### IV. *Of the Preparations of Mercury.*

We have already had occasion to observe that crude mercury is not soluble in any of the fluids which it usually meets with in the human body ; and as no effects result from it while it remains in this insoluble state it has been considered as a very important object to prepare it in such a manner that it may with most ease and safety be introduced into the system in a soluble form. It unfortunately happens, however, that all the active preparations of mercury, I mean such as prove effectual in curing the venereal disease, are apt to excite very disagreeable symptoms, particularly salivation to a distressful height, purging, and general debility. Scarcely any point in practice has therefore met with more attention than the different methods of exhibiting mercury. Regular practitioners have in all countries been anxious to render mercury at the same time active and safe, while it has been the pride of every empirick to be able to boast of some new discovery by which this remedy may be given with freedom and safety without being deprived of any of its essential properties.

The preparations of mercury are accordingly very numerous : upwards of five hundred might be enumerated. The consequence of which is, that much doubt and uncertainty has taken place concerning them ; for while one preparation has been in common use with some practitioners, we find it entirely neglected by others ; and in some countries preparations of mercury are employed daily which in others are very generally condemned.

This would lead to the conclusion of our being able to cure the disease with perhaps equal ease and safety with a great variety of these preparations, and this I believe to be in some measure the case. We are very apt to fall into a routine of practice, from which it is with some difficulty that we emerge, and which therefore every practitioner ought early in life to guard against. In no instance is the

want of attention to this more conspicuous than in our practice in Lues Venerea, where the same practitioner very commonly persists in the same method of exhibiting mercury, and is therefore soon induced to suppose that no other is equal to it, whereas were he to make trial of others he would find many by which the disease can be cured with equal ease, expedition, and certainty. To enumerate all the preparations of mercury that have been employed could answer no good purpose; and being unnecessary, the attempt would be improper. I shall shortly mention, however, all such as are in general use, with the views which practitioners have in giving a preference of one to the other.

It is found by experience that mercury may be rendered soluble, so as to prove active when received into the system, by three different processes; by trituration; by calcination; and by solution in a variety of acids.

Whether any property is communicated by any of these processes to mercury which it did not before possess it may be difficult to determine. It would appear that they render mercury active nearly in proportion to the degree of solubility which they give to it; and this again seems to depend in a great measure upon the degree of separation produced by these processes between the different particles of the mercury: At least this is clearly the effect of trituration. We have seen that in a crude state this metal is altogether inert; and we find by experience that it proves active in proportion to the trituration employed upon it; and as by calcination and solution it is rendered still more active than it can be made by triture alone, we conclude that these processes are better calculated for producing a more complete division of its particles.

By agitation alone mercury may be reduced to the state of a powder, as was first attempted by Doctor Boerhaave, and afterwards by the very ingenious Doctor Saunders of London; but the length of time required for this being very considerable, practitioners have been accustomed to triturate the mercury

with such substances as tend more effectually to keep the particles of the metal separate from each other, by which, while the virtue of the medicine is not lessened, the process for obtaining it is much shortened. This, accordingly, is the foundation of various active preparations of mercury, of which the following are in most frequent use.

I. Where the mercury is triturated with unctuous substances, and used externally only, as is the case in the *emplastrum hydrargyri* of the London and Edinburgh dispensatories, and in the *unguentum hydrargyri vel mercuriale*.

II. Where it is triturated with gums, mucilages, and saccharine substances, and chiefly employed for internal use, as in the *pilulæ hydrargyri pharm. Lond. and Edin.*; in the *solutio mercurialis gummosa* of Plenck; in the *injectio mercurialis*; and *mel mercuriale*.

III. Where it is triturated with dry calcerous powders, such as crabs eyes, and prepared chalk, forming what is usually termed *mercurius alkalifatus*.\*

Besides these mercury might be triturated with several other substances with perhaps equal advantage. Sulphur alone seems to render it inert or nearly so. The more friction that is employed upon mercury mixed with any other substance the more active it becomes, while the more that it is rubbed with sulphur the more inert it is rendered.

A very active preparation of mercury is obtained by means of heat; it is termed *mercurius calcinatus*, and is the basis of different pills and powders. In this process the mercury is reduced to a calx by long exposure to a very considerable degree of heat.

Mercury is found to be more or less soluble in every acid, and the calx or salt obtained from these solutions gives the most active form of the remedy with which we are acquainted.

1st, Mercury combined with the muriatic acid gives, by different processes, the *mercurius sublima-*

\* Prescriptions for each of these, as well as for the preparation of every other article which I shall have occasion to mention, will be given in the Appendix.

tus corrosivus, or hydrargyrus muriatus corrosivus; and mercurius dulcis, calomel, or hydrargyrus muriatis mitis; from the first of which are prepared the solutio mercurii spirituosa of Van Swieten; the aqua phagadenica and other watery solutions of corrosive sublimate of different authors, and pilulæ e mercurio corrosivo. From the latter, viz. mercurius dulcis, are prepared a variety of active formulæ both for internal and external use; but these differing only in the vehicles by which they are conveyed it is not necessary to enumerate them here.

2dly, With the acid of nitre, from which is prepared mercurius precipitatus ruber, the basis of various external applications; unguentum hydrargyri nitrati mitius, vel unguentum citrinum; and the pulvis mercurii cinereus.

3dly, With the vitriolic acid, with which we prepare turpethum minerale.

4thly, With the acid of vinegar, from which is prepared Keyser's pills; analogous to which is the terre feuillette mercurielle of Preslavin, prepared with mercury dissolved in the acid of tartar.

Mercury has also been dissolved in the acids of lemons, sugar, borax, arsenic, and spar; and in a greater or lesser degree it is soluble, as I have already observed, in perhaps every acid; but as every useful purpose of the medicine may be obtained from one or other of the foregoing forms, it appears to be unnecessary to enumerate more, particularly, as those who wish for farther information will readily obtain it in the various Dispensatories published in different parts of Europe.

It may here be proper to remark, that although all of these preparations are in appearance different from each other, yet all of them seem to have nearly the same effect upon the mercury. They tend all to reduce it to the form of a calx, and in proportion as the calcination is completely accomplished the medicine becomes active or otherwise. Even the trituration of mercury has the effect of reducing it to the state of a calx, and it is obviously in this manner that it is acted upon by acids; for when dissolved in acids, and the solution evaporated, nothing but a pure calx is observed to remain.

But although all of these preparations of mercury seem to be more or less active according as the calx which they produce is more or less perfect, there is however some manifest difference in the calces obtained from them. All of them produce the distinguishing characteristics of mercury upon the system: they cure the venereal disease; and they excite salivation; but this is done much more easily, and with less distress in the operation, by some of these than by others.

Of all the preparations of mercury those produced by triture alone seem to be the best for general use. They cure the venereal disease with the same certainty as the others, and they are not so apt to affect the stomach and bowels; although the saline preparations of mercury, when the acid with which they are combined is completely separated from them, may, under proper management, be given with perfect safety, and with equal certainty of curing the disease. Corrosive sublimate mercury, as it is termed, is one of the most acrid of all the mercurial calces,\* inasmuch that scarcely any person can bear it in the dose of a grain, and in the quantity of a very few grains it acts as a poison; but even this very acrid remedy is rendered so mild by being deprived of the acid with which the mercury is united, that in the form of calomel it may with safety be given to the extent of several grains at once.† We find also that the saline calces of mercury prove in some degree acrid in proportion to the strength of the acid with which they are combined: hence all the combinations of mercury with the muriatic acid, with the acid of nitre, and the vitriolic acid, prove much more acrid than the calces obtained from mercury united with the acetous acid, or acid of tartar. It is therefore probable that if these preparations of mercury could be entirely deprived of their saline combinations, that they would not differ in any material point from the preparations obtained of this metal by triture.

As yet however we have not been able by any process to which they have been subjected, to prevent them from operating very differently upon the human body, according to the kind of acid with which they are prepared.

\* Vide Appendix, No. 8.

† Vide No. 9.

Thus, while simple triturated mercury acts chiefly upon the salivary glands, mercurius sublimatus corrosivus is more apt to act as a diaphoretic, and it readily excites nausea and vomiting. The same preparation again, when more completely deprived of its acid, does not seem to affect the skin, nor in small doses does it so readily injure the stomach, while it acts with more certainty as a purgative. Indeed calomel, in proper doses, is perhaps one of our surest purgatives; and in order to act upon the salivary glands it must either be given in small doses, frequently repeated, or combined with opium or some other astringent. The mercurius cinerius is also apt to affect the bowels, while the combination of mercury with the vitriolic acid in the form of Turbeth's mineral, or hydrargyrus vitriolatus flavus, chiefly operates upon the stomach.

It is proper that in practice these different actions of the preparations of mercury should be kept in view; for although all of them, as I have observed already, will, under proper management, cure the venereal disease, some advantage is occasionally obtained from adapting them as much as possible to the nature of the symptoms for which they are intended. Thus, when a mercurial emetic is wished for, we give Turbeth's mineral; calomel is always given as a mercurial purgative; and in particular affections of the skin corrosive sublimate appears in some instances to succeed where other preparations of mercury have failed.

#### *V. Of the different Methods of exhibiting Mercury.*

In the cure of Lues Venerea, mercury, in every form, acts either locally upon particular systems or it enters the system and cures the disease of the constitution. We shall afterwards have occasion to speak more particularly of the treatment of local affections; at present we shall attend chiefly to the different methods of throwing mercury into the system.

Three different methods have been employed for exhibiting mercury; by conveying it in the form of fumes; by taking one or other of the preparations of mercury in-

to the stomach ; and by applying them to the surface of the body.

The fumes of mercury are applied to the body by burning different mercurial calces in the patient's chamber. By thus breathing, as it were, a mercurial atmosphere, and having the fumes equally applied to every part of the surface of the body, the usual effects of mercury upon the system are soon produced, more quickly perhaps than by any other method. Cinnabar is commonly employed for this purpose ; but Turbeth's mineral, with the addition of sulphur, and Æthiop's mineral, answers equally well.

Where it is meant to raise a salivation suddenly, or to throw mercury quickly into the system, this is perhaps the surest method of doing it ; for with the fumes of mercury a salivation is sometimes excited in the course of a few hours. This brought the practice into much reputation when salivation alone was considered as the chief part of the cure ; but now when it is known that Lues Venerea may be cured without much salivation being excited ; that the more gradually mercury is thrown into the system the more effectually it operates ; and that very violent effects are sometimes produced by fumegating with mercury, the practice has of late been very generally laid aside.

I think, however, that it may occasionally be employed with advantage ; and in different instances I have found this to be the case. I will not say that it ought ever to come into general practice, but I am clearly of opinion that it should not in all cases be laid aside. The fumes of mercury being applied to venereal sores will sometimes forward a cure when every other preparation has been tried in vain ; and I have met with a few cases in which the mercury either went off too rapidly by stool when taken into the stomach, or where it was not absorbed if applied in the form of unction to the surface of the body, and in which it soon proved effectual when used in this manner. It is particularly useful where venereal sores are seated on parts of much importance ; and where, from making a rapid progress, there is cause to dread that

they may prove hazardous. In such circumstances we seldom fail in giving a sudden check to the symptoms by fumegating with mercury; but this is perhaps all that we should expect from it. It is obviously of a more subtiler nature than any other mercurial application. It therefore enters the system more readily; but the effects produced by it are not usually permanent. By a proper application of the fumes of mercury sores may be healed speedily, and the pains induced by venereal nodes very completely removed, and yet the disease will return in full force if this practice alone should be trusted. When therefore it is judged proper, for the reason I have given, to employ mercury in this manner, and when the symptom for which it was employed is checked, the cure should be completed by some other preparation, whose effects, although slow are more permanent, as very generally happens both from a proper application of mercurial ointment and from the internal exhibition of the common mercurial pill. In this manner much benefit may be derived from a remedy which seems to have been laid aside without any sufficient reason, and from our trusting to it alone when others ought to be given along with it.

The fumes of mercury may also be applied with safety. They appear to prove hurtful chiefly when received in too great quantity into the lungs, but this may easily be prevented by burning a small quantity at once; and we may even confine the steam to the surface of the body, or to any particular part of it. Such boxes as are employed for confining the steam in vapour baths answer the same purpose here.

We have daily proofs of mercury entering the system by being absorbed from the stomach and intestines; but this mode of exhibiting the remedy is liable to one very important difficulty. Every preparation of mercury that has yet been invented is apt to irritate either the stomach or bowels, by which they not only excite sickness and purging, but by depriving the patient of appetite he soon becomes much emaciated and debilitated. When pushed far indeed the effects of mercury given in this manner are in some instances very distressful. The stomach becomes

so much weakened that any food taken into it is either immediately rejected, or remains undigested, and the bowels are so entirely deprived of their tone that they seem to lose all power of retention. Even when completely emptied a degree of tenesmus often takes place, from which a great deal of misery is often experienced.

The preparations of mercury which do least injury to the stomach and bowels are those, as I have already observed, that are obtained by agitation or triture; but even they prove frequently troublesome, and require always a good deal of management. They should never be given in large doses; and as soon as any degree of irritability is induced by them, either in the stomach or intestines, an opiate should be given along with them. Of these preparations, the best and most convenient form is the blue pill of the Edinburgh dispensatory, of which four grains of the mass, which contains one grain of mercury, being given three times a-day, will in most instances affect the mouth in a very short time. Some constitutions indeed require more, but this seldom happens where the mercury has been sufficiently triturated. Wherever much more than this has been given the mercury either has not been properly triturated or we may conclude that much of it has passed through the intestines without being absorbed, or that the constitution of the patient resists this effect of mercury.

*Mercurius alkalifatus*, and Plenck's solution of mercury in mucilage of gum arabic, are nearly of the same nature with the blue pill, but they are both more apt to purge, particularly the latter, notwithstanding of all that Plenck the inventor has said to the contrary. When properly prepared no more mercury should be given in either of these formulæ than in the mercurial pill; and as a much greater quantity is commonly directed, this can only proceed from neither of the preparations being made with sufficient exactness, and from much of the mercury which they contain being left altogether inert by not being duly triturated.

Many will be surprised at the small doses of these articles which I have mentioned here, as more than double of this is commonly given. It is not uncom-

mon to advise six, seven, or eight of the blue pills daily; and twenty grains of mercurius alkalifatus is recommended for a dose.\* Now I know from daily experience that the blue pill when properly prepared cannot be given in this quantity. I seldom give more than two pills a day, and very rarely above three; and in each pill, as I have observed, there is exactly one grain of mercury. But the mass from which these are formed is prepared with much attention: they are triturated six or seven hours daily for thirty or forty days; and when the mercurius alkalifatus is properly prepared it proves equally powerful; but it is difficult to separate the particles of mercury when rubbed with a dry powder, that this preparation is now very generally laid aside. It requires to be rubbed for at least one hundred days, in order to bring all the mercury into a state of activity.

Some are of opinion that mercurius calcinatus is equal in its effects to any of these preparations.† The dose is a grain or two evening and morning, either in the form of a pill or powder. It will certainly cure the disease, and it puts a stop to the symptoms perhaps as soon as any other form of mercury; but I have sometimes thought that its influence is not so permanent; that is, the symptoms have been more apt to recur after a sufficient quantity of this medicine was supposed to be given. But so many facts are requisite to ascertain this that I cannot speak decisively about it. From all that I know of it, however, it does not appear to be equal to the blue mercurial pill. The ease with which it is prepared seems to be the only circumstance in which it has a preference; but this is a point of little moment when put in competition with utility. A tendency which it has to act upon the stomach and bowels may for the most part be checked by the addition of a small quantity of opium.

\* Vide Mr. Hunter's Treatise on the Venereal Disease.

† Vide Appendix, No. 7.

Hydrargyrus muriatus corrosivus, commonly termed corrosive sublimate, when it does not affect the stomach, proves frequently a very useful medicine. It was never generally employed for internal use till the celebrated Van Swieten brought it into repute. It has since been much used in almost every part of Europe; and being easily disguised, and not so apt to salivate as other preparations of mercury, it has formed the basis of almost all the quack medicines that has of late been employed for the cure of this disease.

The form of using this medicine by Van Swieten is, however, the most nauseous of any. He advises it to be dissolved in spirits, and one or two spoonfuls, containing from a quarter to half a grain of mercury, or even more, is commonly given evening and morning; and this is directed to be continued till a cure is accomplished.\* Few can bear it in this manner; for it not only affects the stomach, but in this quantity it is apt to excite diarrhœa. Neither can it be with safety given in powder, as it is not easily levigated so finely as to prevent it from acting mechanically upon the stomach. The best form of using it seems to be in a watery solution, and this may either be given in a mucilaginous mixture or mixed with broths, or the solution may be made into a mass with crumbs of bread, wheat-flour, or flour of liquorice, and divided into pills.† Instead of giving it in larger doses evening and morning, it answers better to give the same quantity divided into four or five doses. A grain of mercury may in this manner be given daily; that is, a quarter of a grain four times a-day. Some have advised more, but this is the largest dose that I have ever been able to continue for more than two or three days together.

Opiates have not the same influence in preventing corrosive sublimate from acting upon the stomach and bowels which they commonly have with other preparations of mercury. I have found nothing so

\* Vide Appendix, No. 10.

† Vide No. 11.

effectual for this purpose as decoction of guaicum and mesereon, or plentiful dilution with mucilaginous drinks and broths. These may act in the first place by sheathing the stomach and bowels directly from the effect of the medicine; and they may also prove useful by promoting the natural tendency which this form of mercury seems to have to pass off by the skin.

Mercurius dulcis, or calomel, is given by some in large doses for the cure of syphilis, even to the extent of ten grains daily\*. I have not found, however, that this is necessary, and it very commonly proves injurious both to the stomach and bowels. It answers better in doses of a grain repeated three times a day, by which it more readily enters the blood than when given in larger quantities, and is less apt to be carried off by stool.

This form of mercury has long been in general use, and there cannot be a greater proof of its safety and utility than its being still preferred by many of our best practitioners. When as completely deprived as possible of its acid, I believe it to be one of our best saline preparations of mercury. In this state it commonly operates mildly, and is equally powerful with any other form of the medicine in curing the venereal disease.

Mercury in this form is best given in a bolus, in pills, or in powder, for it is scarcely in any degree soluble in water, and it is so heavy that watery fluids do not suspend it, so that it cannot easily be given in a mixture.

The pulvis mercurius cinereus is another very useful preparation of mercury.† It also requires to be given in a solid form. The dose is two, three, or four grains evening and morning. Some have advised more, but I have not found that in common practice more can with safety be given.

Hydrargyrus vitriolatus flavus, or turpethum minerale, is particularly apt, as I have already observed, to act upon the stomach; but even this form of

\* Vide Appendix, No. 9.

† Vide No. 15.

mercury may be so given as to cure the venereal disease and yet prove sufficiently mild in its operation.\* In doses of five, six, or seven grains it acts as a violent emetic, but it may with safety be given to the extent of a grain, two or three times a day, particularly if each dose be conjoined with half a grain of opium.

Hydrargyrus acetatus, or mercury combined with the acid of vinegar, is certainly more mild in its operation than any of the other saline calces of mercury; nay, it does not derange the stomach and bowels so much as triturated mercury is frequently found to do; but from all the trials that I have made of it, I do not consider it as equally certain in curing the venereal disease. The symptoms abate while the patient is under it; but if some other preparation of mercury is not employed either along with it or continued afterwards, they are very apt to appear again soon after it is laid aside.

I have judged it proper to take this particular notice of all the preparations of mercury now generally employed for internal use; and from what I have said, it will be obvious that some of them are for ordinary purposes preferable to others. In common practice, the preparations of mercury obtained by triture, and particularly the blue mercurial pill, will be found to be the best. But as cases sometimes occur which do not readily yield to any one form of medicine, we are under the necessity of having recourse to others; and from what we have already had occasion to remark, the choice may be readily determined. We shall besides have farther opportunities of speaking upon this point when we come to treat of the cure of the different symptoms of the disease.

But although we may in a great proportion of cases be able to cure the disease by one or other of these forms of mercury, and in most instances without any injury to the constitution, yet we find that even the mildest preparation we can employ, and under whatever caution it may be given, is occasionally apt to affect both the stomach and

\* Vide Appendix, No. 16. -

bowels in such a manner that we are under the necessity either of giving it in too small quantities for the purpose of curing the disease, or of laying it aside perhaps entirely; in order to make trial of the medicine in some other form.

Our surest method of obviating this effect of mercury is to apply it to the surface of the body only, a practice which ought as much as possible to be adopted, and to which the chief objection is, the trouble of applying it. The advantages, however, which attend it are so great that every objection of this kind should as much as possible be made to give way to it. A patient may be so situated that he cannot use the medicine in this way; and instances occur occasionally in which the mercury is not readily taken up by the absorbents on the surface of the body. In both of these cases we are under the necessity of giving it inwardly; but scarcely any other good cause can occur for it. Nor would either of these be frequent if the advantages of the practice were sufficiently explained to our patients, and due attention given to the proper application of the mercury. It sometimes indeed happens that mercury does not easily enter the system in any form, and does not in the usual time affect either the salivary or other excretory organs. In such cases, where the symptoms of the disease are urgent, we should not be confined to any one method of cure, and the medicine should be given in every form in which it is likely to prove useful; but it is proper to remark, that failures of this kind are much more frequent from the internal exhibition of mercury than from the outward application of it, and which is another important advantage that we derive from using it in this manner. Different reasons indeed may be mentioned for this being the case; the readiness with which mercury given by the mouth is carried off by stool; the great quantity of food with which it is often mixed in the stomach, and by which we may suppose that a considerable part of the small quantity that we dare ever venture to give in this manner is prevented from coming into contact with the absorbents of the intestines; and lastly, the great extent of surface to which we can apply it externally.

By some it is alleged as an objection to this mode of using mercury, that we cannot exactly ascertain the quan-

tity that enters the system. This, however, holds equally strong against every way in which we can give it, nor is it a point of any importance. It is not so much by the quantity we employ, as by the effects which result from it, that we ought to be directed. The usual effects of mercury upon the mouth, and in the cure of the different symptoms of the disease, will, with some patients, take place from half the quantity of medicine required by others; but were it an object of much more importance than it appears to be, I do not see how the quantity of active mercury entering the system, in any way we may use it, can be ascertained.

It is also mentioned as an objection to the external use of mercury, that it is more apt to excite salivation than when given by the mouth. This, however, is not so much an objection to the practice as to the mode of conducting it. Mercury used in this manner enters the system<sup>o</sup> for the most part so readily, that those who have not been accustomed to prescribe it, are no doubt apt to be deceived with it. It proceeds quickly to the salivary glands, and is thus more apt to excite sudden salivation than when taken into the stomach; but this proceeds altogether from inattention, and may always be prevented by applying the mercury in small quantity at first, and increasing it according to its effects. Our being able to affect the system more speedily by the external application of mercury should be considered as another advantage of this mode of exhibition; for the symptoms of syphilis in some instances advance so rapidly that it is an object of importance to check them as quickly as possible. Salivation appears to be the effect of a certain quantity of mercury in the system, in whatever way it is introduced. Some of the more acrid preparations pass off indeed more readily by other emunctories, but the milder forms of the medicine, and which I have endeavoured to shew, ought in most instances to be preferred, are equally ready to excite salivation. It is true that more time is required to throw the quantity into the system that is necessary for this purpose by one mode than by another, but when this quantity is introduced the effect of the mercury upon the glands of the mouth is uniformly the same in whatever way it is accomplished.

Upon the whole, therefore, all the objections that have been made to this method of exhibiting mercury are trifling when compared with the advantages it possesses over every other mode of using it, so that for general practice it ought to be preferred.

I own indeed that at one period I was of a very different opinion upon this point; but this proceeded from my not being so well acquainted with the superior advantages of using mercury in the form of unction as I now am, and which I now therefore very generally prefer.

Mercury will pass into the system in various forms from the surface of the body. Lues Venerea has been cured by frequent immersions of the feet and legs in a solution of corrosive sublimate. The application of a mercurial plaster to the surface of the body, if of any considerable extent, will also cure the disease; and we are indebted to Mr. Clare of London for a third method of throwing mercury into the system from the surface.\* By rubbing calomel into the inside of the cheeks Mr. Clare found, and his observations have in some degree been confirmed by experience, that we can not only excite salivation by this means, but cure every symptom of syphilis. Nay, the rubbing of a few grains of calomel upon the inside of the preputium or labia pudendi soon affects the system and excites the mercurial foetor in the breath and soreness of the gums. But although I have found this in some instances to be true, the practice has also in several of the trials I made of it failed entirely; that is, it did not cure the symptoms for which it was employed, and which were afterwards removed by other preparations of mercury. I must own, however, that the experience I have yet had of this method of using mercury does not entitle me to speak decisively concerning it; but I conclude either that similar failures, or some other objections of importance, have occurred to it in the practice of others, for we do not now hear that it is employed, although Mr. Clare's book has been published upwards of twelve years.

One obvious cause of this, and of the other modes I have mentioned of applying mercury externally

\* Vide an Essay on the Cure of Abscesses by Caustic, &c. also a New Method of introducing mercury into the Circulation, by P. Clare, Surgeon.

falling into difuse is, that all of them seem to be much inferior to the method of introducing it in the form of an ointment, and which was the first, I may observe, that was employed for the cure of Lues Venerea. It is commonly termed the method of cure by unction, or inunction.

An ointment for this purpose may be made with different proportions of mercury; but the best I have tried is that in which there are two parts of the unguent to one of crude mercury. In the form commonly used the ointment and mercury are in equal parts; but the other, while it proves equally powerful, if it be applied over a greater surface, has the advantage of not being so apt to irritate the skin.

In order to promote the absorption of the mercury it has been the practice with many to advise the body to be immersed in a warm bath, once and again, before the course is commenced, and to repeat it once or twice a week during the whole continuance of it. They likewise think that the bathing proves useful by giving the mercury a particular determination to the skin, and thus preventing it from producing salivation. I have not found, however, that a frequent use of the warm bath is necessary. It cannot in every situation be obtained but with much difficulty, and if not very properly conducted it is apt, during a course of mercury, to expose the patient to suffer from the effects of cold.

Before the commencement of the course, where the skin is particularly dry, I have sometimes thought it right to advise the use of a warm bath, but as in other instances of a similar nature the remedy has answered equally well where this precaution was not taken, I do not conceive that it is of much importance, and I now seldom employ it.

Where the remedy is chiefly employed for the removal of a local affection, such as bubo, we endeavour to make it pass through the lymphatic vessels of the part, and in such cases this determines the place to which the ointment should be applied; but where no local symptom of this kind takes place it may be

applied with equal safety and propriety to any part of the body, and the place of application should be changed from day to day. By this means we obviate the irritation of the skin, which is apt to happen from applying it repeatedly to the same place, at the same time that we promote the absorption of the mercury. I may also remark, that although, for the reasons I have given above, it does not appear to be necessary to immerse the whole body in a warm bath during a course of mercury, yet that some advantage is occasionally derived from causing the parts upon which the ointment has been rubbed to be well bathed with soap and water before repeating it upon the same place. It may therefore be proper to advise this to be generally done.

In applying the ointment, some have imagined that we need only lay it upon the skin, and that it will enter the absorbents with equal certainty whether friction is used or not. This, however, is by no means the case. I have repeatedly put it to the test of experiment, and it evidently appears that absorption is promoted by gentle friction. This indeed is so consonant to general experience, that some may be surprised at my taking notice of it, nor would I have judged it necessary if the contrary opinion had not of late been supported by authority of some weight.

When the patient is able, the friction should be applied with his own hands: Otherwise it must be done by an assistant, his hands being covered with a thin bladder. For want of this precaution, the assistant is apt to be salivated while the patient is deprived of a portion of the mercury. According to the nature of the case, from a drachm and a half to two drachms of the ointment should be rubbed in daily, and it answers better to apply it at two different times than all at once. For the purpose of applying properly this quantity of ointment, that is from forty-five grains to a drachm, twenty or twenty-five minutes of gentle friction is necessary, the patient while under it being exposed to the heat of a moderate fire.

VI. *Of the Duration of a Mercurial Course, and the Quantity of Mercury to be exhibited.*

In the preceding parts of this section I have enumerated the different preparations of mercury which chiefly merit attention, with the doses of each, which may with safety be employed. I am now to offer a few observations upon the quantity of mercury to be given, and the length of time to which a course of this medicine should extend; questions of the first importance in the treatment of the venereal disease.

As salivation is one of the most obvious effects of mercury, practitioners began very early to imagine that the morbid matter of Lues Venerea was carried off in this manner; and at last it was generally believed that a cure could not be obtained if a very considerable discharge of saliva did not take place. In consequence of this every patient labouring under Lues Venerea was made to salivate; and as it was thought to be of importance to have this quickly accomplished, mercury was immediately applied in the most effectual manner for this purpose. It was either prescribed in large doses, and these frequently repeated by the mouth, or frictions with strong mercurial ointment were applied over the legs and arms, and in some instances even over the whole body.

In this manner the system was very quickly charged with as much mercury as it could bear, and for the most part a cure of all the symptoms was no doubt effected; But the sudden manner in which this great quantity of mercury was introduced, and the violent evacuations which it excited, together with the low regimen with which it was commonly accompanied, reduced even the strongest constitutions to a degree of debility from which they seldom entirely recovered; so that a great proportion of all delicate people sunk under it.

A course of mercury, conducted in this manner, became therefore nearly as formidable as the disease for which it was prescribed, and no other remedies being discovered the same practice was still pursued, till a considerable time after the commencement of the present century. About this period some abatement of this rigorous course was introduced; but it was not till of late years that any material innovation took place in it.

This may be considered as one advantage among others that might be mentioned, which we have derived from rational theory. Some practitioners suspecting that the salivary discharge produced by mercury could not probably be the means by which the cure of Lues Venerea was accomplished, and some trials which favoured this supposition being made, they soon came to think that all the symptoms of the disease might be removed with much less mercury than had commonly been employed. If the change of practice, which occurred as a consequence of this opinion, had rested here, much advantage would have been derived from it. But this was not the case. In every attempt to introduce an alteration, while we endeavour to avoid one extreme we are apt to fall into another. The inconveniences and distress induced by mercury in the way in which it had formerly been given being so great that every patient was much afraid of being put under it, any alteration that was proposed for lessening their sufferings was most readily adopted, and practitioners persuading themselves that it might be done with safety, and wishing to adopt the treatment of the disease to the feelings of their patients, they unfortunately allowed this to carry them too great a length. So far as the ease and comfort of a patient is consistent with his safety he is certainly entitled to it, but more than this he should not be indulged in. There is much cause, however, to think that this has happened in the change of practice which has taken place in Lues Venerea. Instead of the full salivation that patients were formerly put under, and the strict confinement with which this was accompanied, a course, commonly termed alterative, was judged sufficient. In this, if the mercury is allowed merely to be felt in the breath, or by the slightest soreness of the gums, it is never permitted to go farther,

and the patient, in a great proportion of cases, is allowed during the whole time that he is taking it to go abroad. That this will prove sufficient in many slight infections, and that it will even answer in many cases of a worse nature, if the course is carried to a proper length, I know from experience is true ; but I also know that it ultimately fails in a great proportion of cases that are more inveterate and of long duration. Even in these it soon gives a check to all the symptoms, and will often make them disappear entirely ; but wherever the system is deeply injured, particularly if the disease has attacked the bones, although a cure may in some instances be completed by such a course, and in all of them may be apparently obtained, yet in many the disease will afterwards break out again, and in all, even the first removal of the symptoms will be protracted to a much greater length than if more mercury had been given.

When I first engaged in practice the treatment of Lues Venerea upon this plan was by many adopted in its fullest extent, and I must own, that few went more freely into it than I did. The opinion of salivation being unnecessary, and that an alterative course was sufficient, had not only been taught in the schools of medicine, but the practice had been adopted by many of our best physicians and surgeons. Beginners therefore went readily into it ; but if others from farther experience have been led to form the same opinion of it which I have done it will soon, except in the slightest cases, be generally laid aside. The result of all my experience is, that I am now fully satisfied that to render general practice in the venereal disease safe ; that is, to guard as much as possible against a return of the disease, a middle course must be observed between the severe degrees of salivation which our forefathers judged necessary, and the opposite extreme into which the moderns have fallen.

In cases of a slight nature, that is, in the incipient state of mild chancres, what is commonly termed an alterative course will be found sufficient. If the mouth be rendered gently sore, and kept in this state for eight or ten days after the chancres are cured, no more will be necessary. But even in the treatment of chancres only, if they have been of long duration, or not of the mildest kind, and in every

other symptom of the disease, the mercury should in a gradual manner be given so as either to induce a very considerable degree of soreness in the mouth, and which in most instances will be attended with an increased discharge from the salivary glands, or when from peculiarity of constitution this cannot be induced, we should persist in the use of mercury till the febrile symptoms which it usually excites are brought to as great a height as the patient can easily bear. It will generally indeed be perceived that those symptoms of the disease to which I allude cannot be cured but with such a quantity of mercury as perhaps in every instance excites heat, quickness of pulse, anxiety, and restlessness, and in proportion as the patient is able to bear these in a greater or lesser degree the sooner and more effectually will he get free of the disease.

I have already observed that I give a general preference to the method of cure by unction; but whatever preparation of mercury we make use of, it ought, in ordinary cases, to be pushed in a gradual manner to the extent I have mentioned; and when as much of it is employed as is sufficient for this effect, it ought to be continued so as to keep the system in an equal degree under its influence, not only till all the symptoms of the disease are removed, but for some time thereafter. This will in different cases happen at different periods of a course, and with very different quantities of mercury. It is therefore obvious that nothing decisive can be mentioned, either of the length of time to which a mercurial course should extend or of the quantity of the medicine that should be given. Our surest, and perhaps only guide that should be trusted, is the result of experience in similar cases; and as the certainty of guarding against a relapse is a point of the first importance nothing should ever be left in doubt that may be required for this purpose. In all primary affections, that is, in chancres and buboes only, and where no other symptom of the disease has appeared, I have found that a course of mercury conducted in the manner I have mentioned, and continued for a fortnight after the symptoms have disappeared, has at all times proved sufficient; but wherever the skin, throat, or bones have been affected, I now always advise the remedy to be persisted in for the space of a

month after the cure is apparently completed. I cannot positively say that less than this would not do, but in a matter of such moment, where the health and happiness not only of the patient but of his progeny are at stake, it is better to exceed by giving occasionally somewhat more than might be necessary than incur the smallest risk of the poison being ever to appear at any future period.

I have said that in ordinary practice the mercury should be pushed in a gradual manner to the extent to which we mean to carry it; that is, a small quantity should be employed at first, and gradually increased till the full effects expected from it are excited, by which we not only avoid the inconveniences which always occur from a salivation being suddenly induced but are thereby enabled to throw in a much greater quantity, and to keep the system more completely under its influence during the whole course than we ever can do when much mercury is given at once; and this, I may observe, is a point of the first importance in the treatment of syphilis, for whoever has paid attention to the subject must have perceived that our success depends in a great measure upon the effects of the medicine being fully and regularly kept up during the whole duration of the course, and which can seldom be done where it is not given in a gradual manner at first. When the fever, salivation, and other symptoms become severe, and which they are very apt to do when the mercury is given in large quantities at first, an interruption must necessarily take place, and it is the effect of every interruption to protract the continuance of the course and often to deceive both the practitioner and patient. My opinion, in short, upon this point is, that our certainty of obtaining a speedy and permanent cure of any symptom of Lues Venerea is not merely in proportion to the quantity of mercury we employ, but to the quantity which in an active state can be thrown into the system in a given space of time.

But while with a view to this I have advised that in common practice mercury should be given at first in a gradual or slow manner, it is proper to remark that cases are sometimes met with in which it is necessary to adopt a different practice. Wherever the symptoms of the disease are particularly urgent, from their being deeply seated in parts of

much importance, and from the progress which they are making being rapid, we are justified in deviating from this general rule, and in applying the mercury in such a manner as will most speedily get it in a very ample quantity thrown into the system. In this way a check will soon be given to the farther progress of the disease, when the medicine, during the rest of the course, may be given in the gradual manner which I have just pointed out.

The time to be employed in a course of mercury, and the quantity to be given, are circumstances, as I have already observed, that cannot with any exactness be ascertained. They depend in a great measure, as we have had occasion to remark, upon the effects with which they are attended, but I may observe in general, that few cases are so bad as to require the medicine, when properly conducted, to be continued longer than nine or ten weeks. In recent cases four or five weeks are for the most part sufficient; while in some obstinate old affections, where the bones have either been diseased, or the ulcers very foul and extensive, I have known it necessary to go on to the twelfth or thirteenth week.

During these periods ointment of the strength I have mentioned may be rubbed in from the quantity of three ounces to eight or ten. When the blue mercurial pill is employed and properly prepared the quantity may vary from four or five drachms to two ounces, or even to two and a half or three ounces. Whenever these quantities are exceeded there is much cause to suppose that a great proportion of the medicine has not entered the system, either from the improper method of applying it or some other cause.

The opinion which I have thus ventured to suggest of the effects of mercury depending chiefly upon the quantity which in an active state can be thrown into the system in a given space of time, will, at first, be doubted by many. Being contrary to the practice which now generally prevails, few may be inclined to follow it, but those who do will have the satisfaction to find that by means of it they render their patients much more secure than can possibly

be done in any other manner. By giving as large a quantity of mercury as the patient can with safety bear, they will find that the most inveterate symptoms of the disease may be cured in much less time, and with much more certainty than they usually are by an alterative course, which, however well it may be adapted for the cure of the slighter symptoms of syphilis, is by no means sufficient for the removal of the more advanced stages of the disease.

Many practitioners think that the same quantity of mercury must prove equally useful in whatever time it may be given, provided the mouth be kept moderately sore during the whole period. This, however, is not the case. I have met with various instances of venereal sores, as well as other symptoms, which had either obstinately resisted a very long continued course of this kind, or which had recurred from time to time after a cure had been supposed to be obtained, and which at last were entirely removed by a much less quantity of the medicine being given in a shorter period. What I wish to inculcate is, that the more inveterate symptoms of the disease will seldom yield to an alterative course of mercury, however long it may be protracted, while the same quantity of the medicine will seldom fail, when given so as to keep the system for a shorter period more completely under its influence. I have now the history of more than fifty cases in which this actually happened; where venereal sores, from resisting mercury under an alterative course, were judged to be incurable, and where complete cures were afterwards obtained merely by carrying the use of mercury to a greater length than had previously been done.

#### VII. *Of the Regimen to be observed during a Course of Mercury.*

It was formerly the practice and still is in some parts of Europe, to put every patient while taking mercury upon a low diet, and previous to the com-

mencement of the course blood-letting and purgatives were prescribed.

When it is necessary in a full habit of body to throw in any considerable quantity of mercury very quickly, and especially when it is known that the patient has been liable to inflammatory complaints, some previous evacuation is proper, and the patient during the first part of the course, should be kept upon a low allowance. But in general there is no cause for this, and the cure proceeds with least difficulty when the patient is kept upon his usual diet. It is the effect indeed of mercury to produce weakness in such a degree, that if not counteracted by nourishing diet, it is apt to injure the constitution materially. Of this I have met with so many instances, that unless where some strong objection occurs to it, I always desire patients under mercury to live as well as a person in health ought to do. A full allowance of animal food would in most instances be improper, but I have never observed any harm occur from a plentiful use of any other article that did not disagree with the stomach and bowels. When mercury is taken by the mouth acid vegetables are apt to do harm; but there is no cause for avoiding them when the cure is conducted by unction.

Patients under mercury are commonly desired to avoid wine and even malt liquor. A great quantity of either ought never to be given; but in moderate quantities they may be used with safety. Different opinions have also been entertained respecting the propriety of patients going abroad while under mercury. So far as my observation enables me to decide, I think there should be but one opinion upon the subject. We are often obliged to allow venereal patients when using mercury to go abroad, and to manage their ordinary business, but I have never done so but with regret. Exposure to the irregularities of the external atmosphere always does harm in a course of mercury.

It is apt to produce distress at stomach, pains in the bowels, and purging. This necessarily impedes

the operation of the medicine, by which the cure is not only protracted but rendered more uncertain. I am clearly of opinion therefore, that this kind of exposure should at all times be avoided. At the same time I do not think it necessary that patients under mercury should be kept in a great degree of heat. On the contrary, much advantage is derived from their living in a large well aired apartment, and in a degree of heat that is most agreeable to their own feelings. Nay, except in the cold weather of winter and spring, there is no necessity for confinement to one apartment; and any unusual quantity of cloathing, whether in bed or during the day, is altogether unnecessary. In short, much exposure appears obviously to prove hurtful, while no advantage is derived from the patient being kept in an unusual degree of heat.

I think it proper, however, to observe with respect to cloathing, that linen should never be worn next the skin during the use of mercury; whether the patient sweats much or not it keeps the surface of his body colder than it ought to be; and if he is liable to plentiful perspiration he is even apt to be hurt by it. Flannel should be wore during the cold of winter and spring, and cotton when the weather is more temperate.

#### VIII. *Of Profuse Salivation and some other Effects of Mercury.*

We have already had occasion to see that in the cure of Lues Venerea there is no advantage to be derived from any increase that may be made to any of the secretions. But we have also seen that the advanced stages of the disease cannot be with certainty cured without such a quantity of mercury being thrown into the system as very commonly excites an increased discharge of all the secretions, and particularly of the saliva. When this continues moderate no harm ensues from it, but occasionally they come to such a height as to produce much inconveniency and distress. Indeed the readiness with which mercury in some cases runs to the mouth is such that it is with difficulty a

sufficient quantity for curing the disease can be given; and it produces, I may observe, one of the most distressful circumstances that we meet with in practice.

The most certain method of preventing severe salivation is the gradual exhibition of mercury in the manner we have already pointed out. Occasionally we succeed in preventing it by guarding against external cold, by confinement to the house and the use of warm cloathing of flannel or cotton. But while in this manner we support a gentle and equal flow of the matter of perspiration, severe sweating is to be avoided, which always proves hurtful, and even sometimes, as I have thought, more so than profuse salivation. But in some cases, even with all the attention that can be given, the mouth becomes quickly sore, and a gradual discharge of saliva takes place much sooner than is expected.

Purgatives are the remedies most frequently employed for removing salivation: I have not found, however, that they prove useful, and when persisted in they never fail to do harm, for they weaken the patient, while they seldom have any effect in lessening the salivary discharge.

Blisters have also been advised. The sense of suffocation, which the swelling of the salivary glands sometimes gives, would appear to indicate the use of blisters. We do not perceive, however, that they have much influence upon the discharge, while by the irritation which they excite they very commonly do harm.

As sulphur when combined with mercury renders it so inert that it scarcely acts upon the human body, many have imagined that it ought to have some influence in lessening or removing the ordinary effects of mercury upon the system. We do not find in practice, however, that these views which theory suggested are in any degree realized. It has often been employed for lessening the violence of salivation, but few instances have occurred of any advantage being derived from it.

To me it appears that this effect of mercury is entirely local, and to be cured therefore with most certainty by local remedies. It is obviously the consequence of irritation produced by mercury upon the salivary glands: The dread, therefore, which some have entertained of applying

local remedies seems to have no good foundation ; and accordingly I have found that they may be employed with freedom. As a wash for this purpose lime-water proves useful, but it requires to be diluted. A strong infusion of red-rose leaves, of galls, oak-bark, and other astringents, prove also serviceable ; but the most effectual application I have ever employed is a strong solution of borax.\* A little of it being kept in the mouth from time to time proves exceedingly pleasant and soothing, and at last has often an obvious effect upon the quantity of the discharge. It may prove in some degree useful as an astringent, but it seems to act chiefly as a sedative by lessening the irritable state of the salivary glands.

It is evidently in this manner that opium proves useful in removing salivation ; for although some advantage is derived from applying it directly to the parts affected in the form of a gargle it proves always much more useful when given internally. A dose of laudanum, sufficient to allay the irritation and pain which always accompany a profuse salivation, and to procure sleep during the night, not only gives temporary relief but is the most powerful remedy we can employ for removing the discharge. When the uneasiness is severe the opiate should also be repeated in the morning.

Where salivation comes suddenly to a greater height than the quantity of mercury we have employed should give us cause to expect we are apt to be at a loss, and afraid of giving more lest distressful consequences ensue from it. In such circumstances, however, I have often found that although the usual quantity of mercury was continued daily the salivation was not increased, and that in this manner it might be persisted in till the cure was completed. This will not indeed be always the case ; but it succeeds so frequently, that in every instance a trial should be made of it, for a cure may thus be effected in a few weeks which otherwise might be protracted for several months.

It has also been remarked, if salivation excited in this manner be allowed to subside entirely, that the same, or even a greater quantity of mercury, may afterwards be exhibited without any risk of the discharge coming again to

\* Vide Appendix, No. 20.

a similar height. Of this I have met with several instances, so that the practice may always be adopted when it is found that a proper quantity of the medicine cannot be continued with safety from the first.

One of the most distressful occurrences which we meet with in this disease proceeds from a peculiarity inherent in some constitutions, by which even the smallest quantity of mercury that we employ is apt to rush with violence to the mouth. This is particularly apt to happen where the patient at the same time labours under the sea scurvy. In this case our only remedy is the removal of the scorbutic diathesis by a plentiful use of acid vegetables and other antiscorbutics, but where it does not proceed from this cause all that we can do is to give those preparations of mercury that are least apt to affect the mouth, and to prescribe them in the smallest doses. In this view corrosive sublimate in small quantities is particularly indicated; and in such constitutions I have sometimes found that Plummer's pill, a combination of calomel and sulphur, and which in common practice no great dependence can be placed upon, has proved completely successful.\*

It luckily happens, however, where salivation is thus easily excited that the symptoms of syphilis in general yield to a small quantity of mercury. Some of the worst symptoms of the disease will give way to a salivation induced by a very few grains of mercury. Even the uneasiness produced by nodes subsides at once on the salivation being fully excited. But it is proper to remark that this first effect of the mercury will not prove permanent if it be not followed out with farther quantities, given at such intervals as the state of the salivation will admit. I have repeatedly found, however, that this may be done with safety, even where a severe degree of salivation has previously taken place. In one case of this kind, where there were deep venereal ulcers on the shoulder and on the head, as well as a node upon one of the bones of the fore arm, a violent salivation was excited by the exhibition of five mercurial pills, each of which contained only one grain of mercury. This gave an entire check to the pain which accompanied

the node, and to the progress of the ulcers, and although other five pills only were given the salivation was kept up for eight weeks, when the sores healed and the cure was complete, no venereal symptoms having yet appeared, although several years have elapsed.

In the progress of a long continued salivation tooth-ach and pains in the jaws and gums are apt to occur, and they add much to the distress of the patient. There is one advantage that we derive from giving mercury in a gradual manner; by beginning with small quantities and increasing them slowly the glands of these parts do not swell so suddenly, nor is the pain which ensues so severe as when too large doses are made use of at once. We also derive some advantage from keeping the parts moderately covered with thin flannel. There is no necessity for the head being so warmly covered as is commonly done, nor is it at all necessary where these pains do not take place; but when once they have occurred nothing proves more useful than moderate warmth. Indeed flannel seems here to be equally useful as it is in the ordinary form of rheumatism; from which, and from the resemblance which these pains to which patients taking mercury are liable in their jaws and head bear to rheumatic affections, I conclude that they are of the same nature.

Before a patient enters upon a course of mercury, if there is cause to imagine that he will be long kept under it, and that a large quantity of the medicine will be necessary, we may save him a good deal of distress by inspecting his mouth and removing any teeth that are either very loose or much spoiled; for teeth in this state never fail to give much pain when the full effect of the mercury upon the mouth has taken place. The points of teeth that are ragged ought also to be removed, as they are apt to produce painful and troublesome ulcers on the contiguous parts as soon as they become much swelled.

Ulceration of the inside of the cheeks and other parts of the mouth occurs also, and often in a very distressful manner from the mercury alone, where no teeth in this state can be discovered. The most effectual method of preventing this is, to cause the patient, from the very first effect of mercury upon these parts, or even before this takes place,

to wash his mouth several times a-day, perhaps every two hours, with port wine and water, an infusion of red-rose leaves, or any other astringent. In this manner we strengthen the parts against the usual action of the medicine, and it also proves useful by preventing that foulness of the mouth which in every course of mercury is apt to take place. Fig-tree and other emollients are commonly employed for this purpose, but I have not found that they answer so well as astringents.

In speaking of the different preparations of mercury we had occasion to remark, that almost all of them, when given internally, are apt to injure the stomach and bowels. It is chiefly the bowels, however, which suffer from mercury, and they do so in some instances in a very alarming degree. The purging which takes place proves not only painful and debilitating, but often exceedingly obstinate. At first the discharge consists chiefly of *fœces*, but afterwards these are mixed with slime, and often with considerable quantities of blood. The patient is also apt to suffer from a very frequent tenesmus.

From the similarity of symptoms we should be apt to imagine that purgatives might be equally serviceable here as in common cases of dysentery and diarrhœa; but we do not find this to be the case. We derive some advantage, however, from sheathing the intestines with a plentiful use of the farinaceous vegetables, and animal jellies prepared with calves feet, and shavings of hartshorn. Milk boiled to the consistence of a jelly with wheaten flour, or flour of rice, proves likewise an useful remedy.

In preventing this effect of mercury upon the intestines we derive most advantage from the patient being kept in a moderate and equable heat, and from his skin being preserved in a perspirable state, and so remarkable is the influence of this, that the slightest check to the discharge by the skin seldom fails of inducing purging. The fact indeed is so generally admitted that I would not have taken this particular notice of it, if a contrary opinion had not lately been advanced, and from which much mischief might ensue, were the practice to be adopted which it tends to inculcate.\*

\* Mr. John Hunter, whose ingenuity and abilities are only to be equalled by his singular opinions, does not imagine that the operation of mercury can be af-

Camphor proves sometimes useful in correcting this symptom. It may be given for this purpose to the extent of eight or ten grains, three times a-day. Some of the absorbent earths, and kino, are occasionally used with advantage ; but opiates, particularly when thrown up by the rectum, are the remedies upon which we chiefly depend for removing the pain, and this is very commonly attended with a diminution of the discharge. When a clyster of thin starch and fifty or sixty drops of laudanum can be retained it seldom fails to give immediate relief, but where the tenesmus is severe whatever is injected by the anus is very apt to be instantly returned. In this case opium conjoined with kino, in the form of pills, seems to be the best form of the remedy.

It is here proper to remark, that although purging and gripes are frequent consequences of the internal use of mercury they are seldom observed during the longest mercurial course where unction only is employed. When the course is conducted in this manner loose stools may occasionally occur, but they may be generally traced to the effects of cold and dampness. I have seldom observed an instance of severe or obstinate diarrhoea from the external application of mercury, where the commencement of the purging could not be traced to some other cause.

When none of the means employed for removing purging induced by this cause prove effectual, we are under the necessity of advising a temporary suspension of the mercury, without which, indeed, all our remedies will frequently fail.

Profuse sweating, I have already noticed as an effect that sometimes ensues from mercury, and it ought to be guarded against with much attention. Nothing tends more to induce debility and injure the constitution than a long continuance of this symptom.

The most effectual method of preventing sweating is to avoid much warmth, so that patients are seldom

affected by cold, not even by the patient being allowed to walk "in frost and snow." Mr. Hunter does not say that he has practised this method, and I cannot avoid observing that nothing should have warranted the publication of such an opinion but very ample experience of its being well founded. *Vide* Mr. Hunter's Treatise on the Venereal Disease, p. 349.

hurt with it who pay due attention to the heat of their apartments. It was formerly the practice to confine patients under mercury to small apartments; to prevent as much as possible all kind of access to the external air; and to have the bed placed by the side of a large fire. These measures prove detrimental in different ways, and they seldom fail to excite a constant and profuse perspiration. The most effectual method of preventing this is, to keep the patient in an equal moderate temperature, in a large apartment, and even to admit of his going from one apartment to another, which, in most instances, may be done with safety. A nourishing diet, a moderate allowance of wine, the free use of Peruvian bark, and of the vitriolic acid, are the most effectual remedies against this effect of mercury. But nothing proves successful where the apartment is kept too much heated.

In some cases the kidneys are particularly acted upon by mercury; but the discharge of urine which it excites is seldom so great as to injure the patient. Were it ever to do so, the remedies commonly employed in diabetes would be advised, and of these the most effectual perhaps that we could give, would be such as operate by promoting a diaphoresis.

It is not an uncommon effect of mercury to excite an eruption upon the surface of the body. In some this appears as a miliary rash, somewhat resembling measles; while in others it is considerably elevated, and seems to be produced by a serous effusion between the cutis and scarf skin. In some the eruption is partial, being confined to particular spots, while in others it prevails generally over the whole body.

This eruption or efflorescence is not attended with pain, but the heat and itchiness which accompany it are in some instances so distressful that it keeps the patient at all times very uneasy, and deprives him entirely of rest.

The remedies which I have found to answer best are the internal use of opiates, conjoined with the application of flour, or starch-powder to the parts affected. The skin is kept sufficiently cool and easy

by one or other of these powders being from time to time freely applied to the eruption; and by a proper exhibition of opiates we secure rest during night. In some instances, however, we are obliged to avoid the use of opiates; for although they may answer the purpose of procuring sleep they tend evidently to increase the heat and itchiness of the eruption. We find, indeed, that in some constitutions opium excites an uneasy itchy sensation over the whole body, even where no irruption has previously taken place; and it is perhaps with such patients only that it cannot be employed in the treatment of this eruption.

The eruption to which I allude appears to arise entirely from the effect of the mercury upon the system; but it does not seem to depend on any particular preparation of the remedy. It takes place indiscriminately from all of them, and not more readily from unction than from these preparations that are used internally. But there is a kind of eruption of a local nature, produced entirely by the friction employed in the application of unction. This appears in the form of distinct pustules, which in some are accompanied with a good deal of uneasiness, while in others they produce no kind of distress. No remedy proves of any avail while the application of the ointment is continued, but the eruption may always be prevented by the precaution we have formerly given, of not applying the friction in daily succession to the same part.

IX. *Does Mercury ever fail in the Cure of Lues Venerea?*

This is a question of the highest importance, and therefore merits our attention. I am disposed from the result of my own experience to say, that mercury under proper management may be considered as a certain remedy for syphilis, when not combined with other diseases, or where it does not affect patients whose constitutions are so reduced and debilitated as

to prevent the quantity of the medicine that is necessary to destroy the virus from being employed. I know that some are of a different opinion; but I conclude that they are wrong, from my never having met with an instance of mercury having failed when it was properly given, but where some obvious reason, such as I have mentioned, could be assigned for it.

Lues Venerea, as we have already had occasion to see, is often combined with diseases in which mercury commonly does harm. This is particularly the case in scurvy, and in some degree with scrophula. In the higher degrees of scurvy mercury cannot be given but with great danger; and even where it prevails in a slight manner only, mercury cannot be employed in such quantities as are sufficient for eradicating any of the more formidable symptoms of Lues Venerea. When the two diseases therefore are conjoined we cannot expect that mercury will have much influence in the cure of any venereal symptoms that may take place; and I believe that we are often disappointed in the treatment of the disease by the patient at the same time labouring under a certain degree of scurvy, which although not so obviously marked as to indicate the propriety of advising an antiscorbutic regimen, may yet be sufficient to prevent him from receiving the full advantage of a course of mercury.

I conclude this to be the case from the frequent instances of the failure of mercury in the cure of many of the symptoms of syphilis, in which it afterwards proves successful when the constitution of the patient has been restored from a weak debilitated state to strength and firmness, and which we usually accomplish by a milk and vegetable diet, country air, and such other articles of regimen as generally contribute to remove even the high degrees of scurvy.

Nay, I believe that a mercurial course when long protracted, is apt to induce a certain degree of that very state of the system which I now allude to, and which I conceive to be the cause of the remedy being often found to fail where in this manner it has been long continued. Every practitioner is acquainted

with this circumstance, that a variety of venereal symptoms, and more especially extensive ulcers, will to a certain length do well under mercury, when after a great deal of the medicine has been exhibited they will begin to remain stationary, and make no progress whatever, although the mercury should be given in larger quantities than at first. Nay, in some instances they become worse. The discharge from the ulcers, instead of being mild and purulent, as for some time it may have been, will become thin, sharp, and corrosive, and the sores themselves more extensive. In this situation a farther continuance of mercury very commonly does harm, whilst the most obvious advantages are derived from it after the constitution of the patient has been restored by the influence of a proper regimen. We even sometimes find that a cure is accomplished by regimen alone, and that no more mercury is required, but this can only happen where a sufficient quantity of the medicine has been previously given for the destroying the virus of the disease, and where the ulcers which remained were kept up by a state of the system, which mercury, instead of removing, seems evidently to promote.

In the commencement of a mercurial course, and for some time thereafter, it is a certain effect of mercury to excite inflammation, and to produce that state of the system which we conceive to be the very reverse of what takes place in scurvy. The pulse becomes full and frequent, and the blood is firm and fizy; but all who have paid attention to the subject will have perceived that the contrary happens where mercury has been long continued. The patient, however full he may have been, is for the most part much emaciated: his pulse is feeble, and any febrile symptoms to which he may be liable are of the low or putrid kind. The particular state of the blood in this situation we have few opportunities of observing, as for the most part the discharge even of a small quantity would in such circumstances prove hurtful, and therefore is not advised: We have reason, however, to conclude, that it is the reverse of what takes place from inflammation, as the most

effectual remedies we employ here, are a generous diet, wine, and bark.

This opinion of the effects of mercury upon the system receives some confirmation, I may remark, from the putrescency which it evidently excites in the mouth; and from the peculiar tendency both of mercury and scurvy to excite a tender state of the gums, and a very foetid state of the breath, we have reason to suppose that the effects of both are in some degree the same.

This might be farther elucidated by various arguments which the extent of this publication will not admit. Enough, however, has been said for the purpose of explaining the chief part of the treatment I have ventured to propose; particularly that which relates to diet and other articles of regimen during a course of mercury.

In speaking of scrophula as an impediment to the action of mercury in the cure of Lues Venerea I do not mean to say that the disease cannot be cured in scrophulous constitutions. We daily meet with the contrary of this: But we also find, when the same fore partakes both of scrophula and Lues Venerea, that we do not derive the same advantages from mercury as in sores purely venereal. In such circumstances, after as much mercury has been given as is productive of any beneficial effect, and of which we judge by the sores or other symptoms making no progress towards farther amendment, our best chance of effecting a cure is to omit the mercury, and not have recourse to it again till by the use of bark, cold bathing, cicuta, and other remedies employed for scrophula, the disposition is corrected or removed by which the operation of the mercury upon the syphilitic symptoms was rendered ineffectual.

But the most frequent cause of our failure with mercury in the cure of this disease is that which I have already had occasion to insist upon, our giving it in such small quantities as are not sufficient in the more advanced stages of the disease for eradicating the virus; by which, although the symptoms may all be rendered much milder, or even apparently removed, they either do not entirely disappear, or if they do, are afterwards very apt to recur. This, however, is not the fault of the remedy, but of the method of giving it, and of which all who adopt the practice of

giving it in sufficient quantities will be convinced. Since I went into this practice, beside having had many instances of the medicine proving effectual when exhibited in these quantities, where it had previously failed, I have not as yet, and several years have elapsed, had a single instance of its failure, except in such combinations as I have mentioned, or where the constitution was in such a state of debility that a sufficient quantity of mercury could not be employed. But even of these very few cases have occurred. I have no hesitation, therefore, in saying that mercury under proper management may, with very few limitations, be considered as a certain remedy for syphilis.

### § 3. *Of Guaiacum.*

Guaiacum has long been employed as a remedy in Lues Venerea. It was used indeed very generally over Europe soon after this disease came to attract the attention of practitioners. Being for some time the only remedy upon which any dependence could be placed, it was at first greatly extolled by all who wrote upon it; and from the testimony given of it by authors of the first reputation, not only of these times, but of later periods, there was no reason to doubt of its being possessed of the power of mitigating, and perhaps of curing some of the symptoms of syphilis. The powers of mercury, however, were found to be so pre-eminent that guaiacum came at last to be seldom used by itself, but by many it was, and still is continued as an assistant to mercury.

Being seldom given by itself many came at last to doubt whether any advantage was obtained from it or not; and some went so far as to say that it possessed no power whatever over any symptom of this disease. This is one, which among other effects, might be mentioned that result from habit and prejudice. I own too, that from the same cause I was at one period of this opinion, till I found by experiment that guaiacum in different forms could even by itself remove many of the symptoms of syphilis. Venereal ulcers and blotches upon the skin are the symptoms in the removal of which its effects are most conspicuous. In three cases of ulcers, and one of blotches upon the breast

and arms, all clearly marked, and in which mercury had never been employed, the symptoms were completely removed by the internal use of guiacum alone. In the patient with blotches, however, the disease returned in the space of a month, but not in the same form. In one of the others the ulcers appeared again at the end of six weeks. In a third they continued well after three months had elapsed, but what became of this patient afterwards, and of the fourth, I do not know. The two first were afterwards cured with mercury.

Although the result of these trials did not induce me ever to trust to guiacum alone, they gave sufficient ground to consider it as a remedy from which some advantage may be occasionally derived when conjoined with mercury; accordingly I have been led to continue, or rather to recommence the use of this remedy in many cases of syphilis, for at one period, from the cause I have mentioned, I had laid it entirely aside.

I believe, indeed, that I would have been induced to place more dependence upon it, or at least to have prosecuted my experiments with regard to it farther than what I had done, if I had not been prevented by the result of some trials which Mr. Hunter also had made with it, and which he published about the same period. By these it evidently appeared that guiacum has a considerable influence upon the venereal virus. I never made trial of it as a local application; but Mr. Hunter found that in this manner it cured venereal ulcers, first in one part of the body, and afterwards in others, where sarsaparilla employed in a similar manner had failed. He found too that very numerous venereal ulcers were removed by the internal use of it, but after both trials the disease soon returned. Mr. Hunter's experiments were made with the gum, mine with an extract and strong decoction of the wood. The extract seemed to be equally effectual with the decoction, but as it has a strong tendency to affect the bowels I soon left it off, and employed the latter only. In these cases to which I allude, as well as in some others, a very strong decoction was employed, three ounces of the wood to an English quart of water, that is, this quantity was boiled in two quarts of water into one, and this was taken in the

course of a day, either by itself or mixed with milk; but as it is apt to purge when of this strength, and is likewise disagreeably acrid, and as I never now depend upon it alone for the cure, I seldom put more than an ounce to this quantity of decoction.\*

That mercury might not cure every symptom of syphilis equally well whether guaiacum was employed along with it or not I will not positively say; but I am disposed to think, and not without much attention to the subject, that the cure commonly goes on more easily when the two are conjoined than when mercury is given to any great extent by itself. I am therefore in the frequent habit of using guaiacum, particularly where the disease is of long duration and has appeared upon the surface, either in the form of ulcers or eruption. It has also been much recommended for its efficacy in nodes, and for the removal of those pains resembling rheumatism, which frequently proceed from syphilis. I have not found, however, that it proves so useful in nodes as in other symptoms of the disease; and where pains only take place we can never with such certainty determine from what cause they proceed, as they are undoubtedly one of the most equivocal symptoms of syphilis, and there is no cause to doubt of guaiacum being a very useful remedy in cases merely rheumatic.

I have in different instances found a strong decoction of guaiacum prove particularly useful in the cure of those extensive ulcers which sometimes succeed to buboes. In some the guaiacum answers by itself, but it proves more frequently successful, as we shall hereafter have occasion to mention, when conjoined with mezereon and sarsaparilla.

#### § 4. *Of Sarsaparilla.*

Sarsaparilla has been long employed in the cure of Lues Venerea, and from the result of some trials which I made with it I am disposed to think that some advantage may be derived from it. The trials which I have made with it along with mercury have been numerous, but it is not upon these that any judgment can be formed of its real efficacy.

\* Vide Appendix, No. 22.

Neither have I given it often where mercury had not been previously used; but I have had many opportunities of using it in cases where mercury had not proved altogether successful, whether from being given in too small quantities, or from being exhibited without that attention to regimen which it requires, and in a great proportion of these it has been productive of evident good effects. I have found it particularly useful in those symptoms which chiefly affect the skin, such as blotches and the remains of old venereal ulcers. When mercury from either of the causes which I have mentioned has failed of completing the cure I have in various instances known it accomplished by sarsaparilla, where otherwise there was much reason to think that mercury in a larger quantity, or given in a different manner, would have been necessary.

I have given sarsaparilla in powder, in extract, and in decoction, but the latter has always appeared to answer best. Not unfrequently I conjoin it with guaiacum, and it answers the purpose of blunting the acrimony of the latter.\*

Sarsaparilla and guaiacum have both a tendency to promote perspiration. Besides any power which they may possess of acting directly upon the venereal virus, they seem also to prove serviceable where mercury goes too readily to the mouth, in diverting it from that outlet.\*

#### § 5. *Of Mezereon.*

The root of this plant has long been employed for the removal of schirrous tumours by whatever cause they may be produced, and many have thought that it has proved particularly useful in venereal nodes, as well as in some other symptoms of this disease. As I have not made much use of it where mercury was not either employed along with it or before it was given, I cannot from my own observation determine whether it is possessed of the power of curing syphilis by itself or not; but from much experience of the effects of it when conjoined with mercury, I can say decisively that in this manner it often proves useful. I have never known any advantage that was suffici-

\* • Vide Appendix, No. 23.

ently clear and obvious derived from it in nodes, but it certainly tends to heal those ulcers which sometimes remain obstinate after the quantity of mercury is given that we judge to be necessary.

I have already had occasion to mention that spreading ulcers of this kind are particularly apt to succeed to buboes, and that they often resist all the remedies that we employ for them. As this sometimes happens after a very full quantity of mercury has been given, and as the sores often heal at last from the effects of a change of regimen alone, I conclude that they are not kept up by any remains of Lues Venerea; and as it is in this state of the disease that I have chiefly observed any advantage to accrue from mezereon, I conclude that it acts particularly by correcting that state of the system which long continued use of mercury is apt to induce, and which by experience we find to be very inimical to the cure of all such sores as the patient at the time may labour under.

It seems to be in this manner that Kennedy's decoction, and of which mezereon appears to form a considerable part, proves particularly useful. There is no reason to suppose that any quantity of mercury is contained in that decoction, and yet there is no cause to doubt of sores of this description having been often soon healed by it, which had previously resisted every attempt that was made to cure them. Of this I could mention several histories which have fallen within my own knowledge, but they are too long to admit of insertion in this place. This decoction, I may remark, appears to be nearly, or perhaps entirely the same with the Lisbon decoction, for which a form is given in the Appendix\*.

In using this root it is proper to observe, that the ligneous parts of it are altogether inert. The bark of the root appears to be the only active part of it. An English quart, containing a drachm and a half of the bark, is a sufficient quantity to be taken in the course of a day, and even this, when the root is in perfection,

\* Vide Vol. I. Nos. 46 and 47.

renders the decoction so acrid that it is apt to affect the throat. With a view to lessen this acrimony we conjoin it with gum arabic, liquorice, althea, and often with farsaparilla\*.

§ 6. *Of Opium.*

Opium had long been employed for the relief of that kind of irritation which some of the symptoms of Lues Venerea are apt to excite, but it was not till within these fourteen years that it was supposed to possess any power of destroying the venereal virus, or of curing this disease. It was first employed with this view in the British hospitals in America; and Doctor Michaelis, physician to the Hessian troops was, I believe, the first who put it to the test of experiment.

Since that period it has been used as an antisyphilitic medicine by various practitioners in almost every part of Europe; and it has had the fate of almost every new remedy, or of every remedy employed with new motives. Some have spoken of it in the highest terms of panegyric, while others do not admit that it is capable of removing even the mildest symptom of the disease. In matters of doubt all that authors ought to attempt is to state clearly what they know to be matter of fact, as it is from the result of repeated trials properly authenticated that an adequate judgment on all such points is alone to be formed. As it appeared to be a matter of the first importance to have a new remedy for the cure of Lues Venerea, and which was reported to act with much more ease and certainty than mercury, I was one among many who gave it a very full trial. It was used in a variety of cases and in different stages of the disease; but in no instance did it accomplish a cure where there was cause to suppose that the virus was not previously destroyed by mercury. Sores originally produced by this virus, and kept up, as is sometimes the case, by irritation alone, and long after the venereal taint is destroyed, are more effectually cured by opium than any

\* Vide Vol. II. No. 24.

other remedy. Sores which from this cause have remained obstinate for a great length of time, are, by the use of opium, often brought to a healing state; and when the constitution is not otherwise diseased, they are, for the most part, soon cicatrised. It is proper, however, to distinguish between these sores and such as are venereal. Sores in this state are not to be considered as venereal. The venereal virus, it is true, has acted as the exciting cause, but this being destroyed by mercury, they no longer depend upon this, and in such circumstances are to be treated in the same manner with sores of a similar nature proceeding from any other cause. In whatever way sores may have taken place, if much irritation prevails, opium is perhaps the best remedy we can employ, but I have not found that it proves more effectual in sores that are the consequences of Lues Venerea than in such as are produced by any other cause, provided the degree of pain and irritation with which they are accompanied be the same.

I suspect much, therefore, that this distinction has not met with sufficient attention by many who consider opium as a remedy in the cure of syphilis. By acting as a very effectual remedy in the cure of many sores in which mercury had failed, they have been induced to attribute powers to opium, which I have much reason to think it does not possess, for I have never known it prove effectual where mercury had not previously been given.

Antisyphilitic powers being once attributed to opium it was readily imagined that in proportion to the quantity exhibited it would prove more or less effectual. It was accordingly given in large doses, and these were more frequently repeated than had been usual in former practice. Few, I believe, made more complete trials of it, or have pushed it farther than I have in various instances done: Beginning with two grains at bed-time, one in the morning, and another at mid-day, and adding a grain to each dose every third or fourth day, patients in this manner I have found could bear very considerable quantities in the course of a short time. One of my patients who could not at first bear more than a grain at once, in the course of five weeks took three doses of fifteen grains each, daily. I did not find, however, that any advantage was derived from

giving it so largely, while it frequently did much harm. It was apt to excite sickness, head-ach, and giddiness, a total loss of appetite, in some an obstinate costiveness, and what was more surprising, it acted with many as a smart purgative. I never observed this effect, however, till the dose came to the extent of ten or twelve grains; but when this symptom did take place from it, no altringent medicine seemed to have any effect in removing it, and it was only relieved by emetics and purgatives.

I must indeed admit that opium was taken by many, even in large doses, without any inconvenience or distress; but being soon sensible that it had no effect in destroying the venereal virus; that it proved in no other way useful than by lessening or removing irritation; and that this resulted with equal certainty from moderate doses, I have of late desisted from giving it in larger quantities than two or three grains in the course of a day.

Opium conjoined with an emetic has long been known as a very useful remedy in rheumatism; and I have found it prove particularly useful in those pains resembling rheumatism which occur in the venereal disease. But the relief which it procures is only temporary if mercury be not employed along with it. For this purpose laudanum may be given along with tincture of antimony, or opium may be given with ipecacuan, in the form of Dover's powder.\*

In some cases opium proves useful as an external application, whether employed as a wash for painful phagadenic ulcers, or in a solid form as an ointment; but it does not appear, even in this manner, to act in any other way than as an anodyne.

\* Vide Appendix, No. 25.

## S E C T. V.

*Of the Cure of Lues Venerea.**§ 1. Of the Cure of Chancres.*

A DESCRIPTION of chancre is given in Section II. of this Chapter, page 8. The first question to be determined in the treatment of chancre is, whether the cure should be trusted entirely to the internal exhibition of mercury; to the use of local applications; or to both of these combined.

A considerable time ago I had occasion to mention my opinion on this subject, and hitherto I have seen no good cause for deserting it.\* My opinion at that time was, as it still is, that chancres should be healed as speedily as possible, and that this may be done with safety by combining the advantages of local remedies with the internal use of mercury.

Many practitioners think that chancres ought not to be healed but by the internal use of mercury alone, and they give as reasons for this, that when external applications are employed we can never be certain whether the constitution is rendered safe or not, while we can scarcely be deceived, they imagine, when chancres heal solely from the use of mercury. To this practice, however, there are different objections. The internal exhibition of mercury alone will not always cure chancres. I have known a person kept under the complete effect of mercury for many weeks, and the chancres for which it was prescribed remain nearly in the same state as at first. Nay, in different instances, where this practice was pursued, and in which the cure was trusted to mercury alone, although the remedy was continued in all of them for six or seven weeks, and under the best management, as the chancres did not heal the mercury was laid aside on the supposition of the constitu-

\* Vide Treatise on the Theory and Management of Ulcers.

tion being rendered safe ; but although in all of them the sores were soon cured by the application of caustic, red precipitate, or some other escharrotic, in several, symptoms of pox appeared in the course of a few weeks ; in some with ulcers in the throat, and in others with blotches upon the skin. From which I conclude that we cannot depend upon the internal use of mercury alone for the cure of chancres ; nor have I observed that it acts with certainty, unless the sores are kept up by the virus having entered the constitution.

But the most important objection to the practice is, that being much more tedious in accomplishing a cure, it creates a greater risk of the virus entering the system than when the sores are more speedily healed by the use of external applications. The practice of healing chancres by the internal use of mercury only, originated from an opinion that venereal sores of every description proceeded from the constitution being infested, and were this the case, there might be cause to consider it as well founded ; but now that we know that chancres at first are always local, and that they are the source of whatever matter enters the system, it is obvious that the more speedily they can with propriety be healed, the less will be the risk of the constitution being injured.

Chancres might frequently be cured by the use of external applications alone, and as we know from experience that the matter is not always absorbed the cure would in a few instances prove permanent ; but as we have no means of distinguishing when this is the case, while there is reason to think that in most instances absorption takes place, we ought in no case to trust to it. In order to avoid the inconveniencies of a course of mercury, it has been fashionable of late to trust the cure of recent chancres to local remedies, but I know from various instances in which I have been consulted, that the practice is exceedingly dangerous. The chancres may be easily healed ; but where mercury is not employed the disease in a great proportion of cases soon shews itself in the system.

The most certain, as well as the speediest cure of chancres is to be obtained from a due attention to external applications conjoined with a well regulated

course of mercury. By the former we are frequently enabled to complete the cure in a few days, which otherwise would require a great length of time, and by the latter the constitution is rendered perfectly secure.

Chancres in an incipient state are most effectually cured by the application of caustic or escharrotics. If the diseased parts are completely destroyed with caustic they soon become clean, and heal as quickly as sores proceeding from any other cause and of the same magnitude usually do. This practice is now very generally adopted, and the effect of it is so remarkable that it has never probably been laid aside by any who have given it a fair trial. None, I imagine, have pursued it more fully than I have done; but I find it necessary to remark, that in the usual way of conducting this practice it is liable to one very important objection: the chancres to which it is applied, if they are not of long duration, very commonly heal quickly; but in a great proportion of cases the cure of the sores is succeeded by buboes in the contiguous glands. For a considerable time I was induced to suppose that the swellings of the glands which thus took place after the cure of chancres were more the effect of accident than of the method of treatment, and that they would have occurred under whatever management the sores might have been. The frequency, however, of their appearance made me at last suspect that I was mistaken, and farther observation made it obvious that this was the case.

As experiment alone could determine the question, I was resolved to employ this test. Of the first twenty patients who occurred with incipient chancres, in ten they were destroyed by an immediate and effectual application of lunar caustic, the remedy being employed according to my usual custom at that time, instantly on my being called. Of the other ten, five were dressed with blue mercurial ointment, and five with common wax ointment. The sores to which caustic were applied healed much sooner than the others, and next to these the sores that were dressed

with mercurial ointment. But to the ten patients to whom caustic was applied no less than eight had buboes, while only one bubo occurred in all the others, and it happened in one of the patients whose chancres had been dressed with mercury. I thought also that buboes appeared to be less frequent from the application of caustic where mercury had been previously given. This fell within my observation from time to time with patients who had taken mercury either of their own accord or by the advice of others, and appearing to be of importance I was resolved to bring it likewise to the test of experiment, and the result was as follows: Of forty-eight patients with chancres in an incipient state, and exactly as they occurred in practice, one half was treated in the manner I have mentioned, by destroying the chancres with caustic, immediately on my being desired to see them, while all the others were put under mercury for eight or ten days before the application of caustic. In every other circumstance the method of treatment was the same. The difference, however, surprised me exceedingly. Of the twenty four treated with the immediate application of caustic twenty were seized with buboes, while only three buboes occurred in an equal number to whom mercury had been previously administered.

These buboes did not indeed all terminate in suppuration, nor did many of them arrive at any considerable size. Being closely watched, mercury was immediately applied for the purpose of discharging them, and for the most part it proved successful; but there was no cause to doubt of their being venereal from their being equally difficult to manage, and from those which ended in suppuration being equally difficult to cure with buboes which occur in the ordinary course of business. At first I was induced to hope that swellings produced in this manner were not venereal, but merely the effect of irritation excited by the caustic, but it soon became obvious that this was not the case, and that caustic does not destroy the venereal virus so completely as is commonly imagined, while, by the irritation which it always in some degree excites, it

tends often to produce buboes, which otherwise never would take place. This affords an additional proof to what has already been mentioned of the effect of irritation in exciting the action of the absorbents; and the effect of mercury in this case, by preventing the formation of buboes, tends farther to support the opinion of this medicine acting as an antidote to the syphilitic virus.

In most instances buboes produced in this manner begin to form in the course of a day or two after caustic has been applied; in some cases even sooner. But I have known them take place where the glands had remained sound for a good many days after the chancres were completely cicatrised, and where there was no reason therefore to suspect that any exciting cause of buboes could remain. In these instances I conclude that such a small portion of the virus had been lodged in the lymphatics forming the gland, as required this length of time to excite that degree of irritation that is necessary for the production of bubo.

The same effect appears to result from whatever caustic is employed; at least this has been the case with such trials as I have made with lunar caustic, red precipitate, blue vitriol, and corrosive sublimate; and as the caustic is more easily applied, while it commonly acts with more certainty, and perhaps with less pain than any of the others, I commonly give it the preference. Where caustic is to be employed, my practice now is to put my patient previously under mercury for the space of six, eight, or ten days, till there is full evidence of the medicine having entered the system. At this time caustic is applied over the whole surface of the chancre, however extensive it may be, in such a manner as to destroy all the diseased parts, and the application is renewed as often as the sores become foul or sloughy. In some it is not necessary to use it above once or twice, while in others it must be repeated in every second or third day, during a great part of the cure. Even where the sores have become clean caustic often proves useful, particularly when they are stationary, and make

no progress towards a cure ; in which case we may commonly make them cicatrise more speedily by the reiterated application of caustic than by any other remedy.

When chancres are brought into a clean healing state a cure will for the most part be obtained by continuing the use of mercury for a sufficient length of time, and by dressing with dry lint, or any simple ointment ; but that fixed or stationary state to which I allude, and in which they often remain where caustic is not frequently applied, is very effectually prevented by dressing with precipitate or calomel ointment ; and in some cases I have employed for the same purpose an ointment prepared with verdigris.\*

In all cases of chancres the parts ought to be kept particularly clean, and the best ordinary wash for this purpose is a weak solution of corrosive sublimate, in the proportion of one grain to seven or eight ounces of water. Where the sores remain foul notwithstanding the application of caustic, but which does not often happen where a sufficient quantity of mercury is given along with it, it becomes necessary to employ a solution with a greater proportion of sublimate. In this case one, or even two grains, may be added to an ounce of water ; but this being too strong for applying to the contiguous parts, care must be taken to confine it as much as possible to those that are diseased. In this foul or sloughy state of chancres, among the variety of dressings which we are occasionally obliged to employ, the blue ointment prepared with equal parts of mercury and hogs-lard sometimes answers well, as it does indeed in almost every state of chancre in which it is proper that mercury should be used. For the purpose too of removing this foul appearance which chancres are very apt to assume, and under which they never heal, red precipitate finely levigated is often employed in powder, and frequently with advantage. Calomel applied in this manner also proves useful ; and it is chiefly in this state of chancres that I have perceived most advantage to be derived from mercurial

\* Formulæ of these ointments are given in the Appendix, Nos. 26, 27, and 28.

fumigations. In all slight cases of chancres a free application of caustic very commonly proves successful; but where the sores are deep, extensive, and very sloughy, together with the use of caustic we are obliged to employ one or other of the articles which I have mentioned; and when precipitate, calomel, and even verdigris have failed, I have in various instances found that the parts have been rendered clean, and brought into a healing state, by fumigating once or twice with cinnabar.

There are two states, however, of chancre which do not admit of this mode of treatment, viz. where the parts affected are either much inflamed, or show some tendency to mortification. In all other situations, whether the sores be upon the glans, prepuce, or frenum, or even within the mouth of the urethra, caustic may be applied with freedom. It may be proper here to remark, that when a chancre is seated upon the frenum, or beneath it, if it is not altogether superficial, the frenum itself should be cut across. It is easily done, no inconveniency is experienced from it, and it tends always to forward the cure.

When the parts upon which chancres are seated become much inflamed, such remedies should be employed as prove most effectual in removing inflammation. When the patient is plethoric, blood-letting in some instances is necessary, together with cooling laxatives, and a low diet.

The parts should be dressed with any simple ointment, such as the common saturnine ointment and wax liniment mentioned in the Appendix.\* In such circumstances too saturnine poultices prove sometimes useful; but nothing ever gives more relief than the internal use of opiates. By allaying irritation they frequently tend more effectually than any other remedy to lessen or remove the inflammation.

In some cases, however, notwithstanding all our attention, this inflammatory state of chancres terminates in gangrene, while in others gangrene takes place where no great degree of inflammation had been previously observed. In these opposite circumstances the remedies to be employed ought evidently to be different. Where much in-

\* Vide Nos. 29 and 30.

inflammation still prevails, blood-letting with other parts of an anti-phlogistic course ought to be pushed as far as the strength and age of the patient can with safety admit, while a plentiful use of bark is perhaps the best remedy where little or no inflammation occurs.

For the removal of inflammation, besides general blood-letting, I have occasionally ventured upon the application of leeches to the diseased parts, and commonly with much advantage. The bites of leeches may in some instances give rise to venereal ulcers, which otherwise would not have taken place, but little or no disadvantage ensues from this, as they heal by the use of the mercury that we must necessarily employ for the cure of the disease, while nothing proves so effectual as local blood-letting, for carrying off that great degree of inflammatory tension which in cases of this description we sometimes meet with.

Whether inflammation takes place or not, gangrene, when it arises from chancres, proceeds with more rapidity than it usually does from any other cause. I have known a considerable part of the glands destroyed by it in the course of a day. For the most part, if not immediately checked, either by general or local blood-letting, or by a liberal use of bark, according to the nature of the case, it proceeds without our being able to put a stop to it till it comes to the urethra. In different instances I have known the urethra laid entirely bare for a considerable length on the mortified parts being removed; and where it begins upon the preputium, it proceeds in some cases not only through the loose skin and cellular substance of the penis, but even into the corpora cavernosa.

The most distressful symptom which takes place from the mortification of these parts is the vent which it sometimes gives to the urine by penetrating the substance of the urethra. In some instances one opening is formed; in others we meet with two, three, or more. Besides the inconveniency and distress which this always occasions it adds considerably to the hazard of the patient, for the urine in this manner finds access to the surrounding cellular sub-

stance, where it not only gives much additional pain, but the irritation which it excites seems to be of a nature particularly apt to create a disposition to gangrene, so that whenever it takes place the mortification extends more rapidly than it did before, nor has bark and the other remedies usually given much influence in putting a stop to it. We derive most advantage from opium. Whether opium acts here as an antiseptic may be difficult to ascertain: I rather suppose that it proves chiefly useful by lessening or removing the irritation produced by the urine, for I have not perceived that its beneficial effects are in proportion to the quantity that is given. Small doses, when they procure ease, seem to prove equally useful with the largest, which they would not probably do if they acted in any other manner. While by means of opiates we endeavour to lessen the pain, much care should be taken to prevent the urine from finding access to the contiguous parts. Where it happens to lodge, the sac which receives it should be laid freely open, and the parts bathed with a decoction of bark, an infusion of rose leaves, or some other antiseptic after every time the patient voids urine.

I have taken the more particular notice of this effect of urine upon parts in this situation as I do not find that it has been mentioned by others, and as various cases have fallen under my care in which the most distressful consequences ensued from it.

Chancres are particularly apt to become gangrenous when combined with paraphymosis, but they do so occasionally where no degree of this symptom has ever occurred.

The most alarming symptom of this state of chancre is the hæmorrhagy which occurs when the mortification reaches the large arteries of the penis. No advantage is derived from tying these arteries with ligatures till the gangrene is completely stopped; so that in this situation we are obliged to trust to the uncertain effects of astringent applications conjoined with moderate pressure. Pressure in this case is most effectually applied by means of a fillet of linen or cotton, passed round the penis, after a leaden or silver tube has been inserted into the urethra.

The point of most importance in this state of the disorder is to determine the propriety of giving mercury, or delaying the use of it till the mortification is over. It is the common practice to continue the mercury that had previously been given for the chancres, and many even judge it necessary to give it in greater quantities. In every instance, however, where I have known this done, it has evidently proved hurtful; and having found from various trials that the mercury may with safety be laid aside during the progress of the mortification, I now never employ it till all the mortified parts are removed. The fear of the disease gaining ground from this, and an opinion of the mortification being of a venereal nature, and that mercury is therefore necessary to stop it, is the cause of its being in general persisted in; but the progress of mortification is so rapid, when compared with the usual symptoms of syphilis, and it is in every circumstance so different in appearance from these, that I do not conceive it to be venereal. It is indeed evidently induced by this disease; but in this respect the syphilitic virus seems to act in no other manner than as the occasional cause; and chancres being at first always local, I believe, that in most instances the sore which remains after the mortification is gone is not venereal, and that it would heal whether mercury should be given or not, in the same manner as would happen with a great proportion of chancres where caustic has been freely applied on their first appearance. But as we cannot in either case know with certainty whether the virus has entered the system or not, the safety of our patient requires in both instances that mercury should be given in such quantities as may be necessary to effect this purpose. While mortification continues to advance it should be treated in the same manner with gangrene from any other cause, and without any regard to the venereal disease: but as soon as the mortified parts are removed, the case should be considered as entirely venereal; a course of mercury should be advised and continued from a fortnight to three weeks or a month, according to the virulence and obstinacy of the symptoms after the sores are cicatrised.

I have seldom, however, found it necessary to discontinue mercury during the inflammatory state of chancres.

Even where inflammation runs high mercury may be safely given. By lessening the venereal irritation, it tends for the most part to abate, and even to remove the inflammation, so that I commonly prescribe it immediately, and persist in the moderate use of it during the whole continuance of this symptom.

After the inflammation produced by chancres is gone they are to be treated in the same manner as if this symptom had not taken place. When they are clean, and with a surface disposed to granulate and heal, any common ointment will answer for dressing them, but when foul or sloughy the application of caustic, calomel, precipitate, and verdigris are equally proper as if the inflammation had not happened. Verdigris may not only be applied to chancres in powder, and in the form of an ointment, but in solution; and it equally tends to remove that sloughy foulness to which I allude, and disposes the sores to heal when they become stationary. It may be used in various proportions, from two grains to a scruple in the ounce of water.

In this clean state of chancres, when the cure does not advance, the application of spirit of lavender, ardent spirits, or even of alcohol, proves sometimes useful; and in some cases we derive advantage from bathing the parts with lime water, a solution of blue vitriol, traumatic balsam, or tincture of myrrh.

One of the greatest impediments to the cure of chancres is their taking place whether on the inside of the prepuce or upon the glans along with phymosis; for when they cannot be kept clean and dressings properly applied, the cure proves always both tedious and uncertain. In all slight cases of chancre in this situation we endeavour to cure them by injecting from time to time, between the prepuce and glans, one or other of the articles I have just mentioned sufficiently diluted; but when the sores are either deep or extensive, the operation for the phymosis should always be advised as the first part of the cure.\* This being a measure to which a patient does not readily assent it is commonly postponed, by which a great deal of time is lost, and chancres often allowed to proceed

\* Vide Chapter III. Section XII.

deep into the substance of the penis, which might easily have been healed without the hazard of this being incurred.

When an operation for this purpose becomes necessary the prepuce should be divided through its whole length. We are commonly desired to carry the incision only the length of the chancres, but in different instances I have perceived bad consequences ensue from this. The undivided skin is apt to inflame and become tight, and the pain from the operation being nearly the same, the other as being more effectual and not productive of these inconveniences, should be preferred.

When the cure, however, is conducted without the prepuce being laid open, besides a very regular attention to cleanliness care should be taken to prevent adhesions between the preputium and glans; a circumstance particularly apt to happen when much inflammation takes place, and from which a good deal of inconveniency is afterwards experienced. This is most effectually prevented by making such liquors as are injected pass freely round the whole substance of the glans, and inserting pledgits with proper dressings, and placing them between the prepuce and those parts of the glans that are affected.

Chancres in the parts of generation of women require the same method of treatment as in men. The parts do not appear to be so irritable, so that they more readily admit of the escharrotic applications which I have mentioned. In both sexes the cure is much promoted by confinement while nothing tends more to retard it than the fretting of the parts by motion in walking or riding on horseback.

Where venereal sores form upon the mons veneris and external parts of the labia pudendi, or when chancres spread to these parts, as they sometimes do from the nymphæ clitoris, where they often begin they are commonly more foul and sloughy than venereal sores in any other situation: Neither are they so readily cleaned by the usual dressings. Besides a more frequent application of lunar caustic they require any

escharrotics that we employ to be used in powder instead of being mixed with ointments. They even admit of being covered from time to time with levigated verdigris; nor have the milder articles of this class, such as calomel and red precipitate, the same influence in keeping them clean that we find them to have in venereal sores in almost every other part. It is proper, therefore, in the treatment of sores upon these parts, that this circumstance be kept in view.

Lunar caustic is the best application for chancres upon the lips. In this situation ointments cannot be conveniently employed, we therefore trust almost entirely to the repeated application of caustic; but in chancres upon the nipples the application of caustic creates so much pain that it ought never to be advised. We are therefore in these parts obliged to employ the milder dressings, and nothing answers better than the common saturnine ointment, or wax ointment, with a fourth part of calomel. Some advantage is also derived from bathing the parts affected with a strong solution of opium in water. It lessens irritability, by which the sores are more readily disposed to heal.

### § 2. *Of the Cure of Buboes.*

A history of the rise and progress of bubo has already been given in Sect. II. of this chapter, p. 8.

Our treatment of bubo has varied and been improved by the more perfect knowledge which of late years has been obtained in the anatomy of the lymphatic system. Till this was acquired buboes were considered as an effort of the system to throw off the morbid matter of the disease, so that in every instance to promote their suppuration was thought to be necessary; but now that it is known that they are not produced by any disease of the constitution; that they originate from a stoppage of the syphilitic virus in its progress to the common course of the circulation; that by bringing mercury into contact with the virus while in this situation we can render it totally

inert; and that fores the consequence of the suppuration of buboes are difficult of cure, we do not hesitate to say that it is the best practice to prevent the formation of matter, and by a proper application of mercury, combined with other means, to procure a discussion of every tumour of this kind.

But although the advantages of this practice are obvious to all who have given it a proper trial, still there are many who have not adopted it, as thinking that they lessen the hazard of the patient by inducing suppuration in the substance of the gland, and afterwards discharging the matter the consequence of the inflammation induced by the obstruction.

We must indeed acknowledge that this reasoning would have every appearance of being well founded, and that the practice of curing buboes by discussion ought certainly to be exploded, was it to be accomplished by forcing the matter of infection into the system, but as we have it in our power by a proper use of mercury entirely to destroy the nature of the matter lodged in the obstructed gland, and as we know from daily observation, that when accomplished in this manner the discussion of buboes can never be productive of danger, it ought in all cases to be advised.

The discussion of these tumours might often be in our power by other means than the direct application of mercury to the matter of infection; but we act with more certainty of doing no harm to the constitution by first destroying the active property of the matter in the obstructed gland, and trusting afterwards to a proper course of mercury for obviating the effects of any part of the virus that may have passed into the system.

On the first appearance of a bubo mercury should therefore be applied so as that it may with most certainty pass into the obstructed gland. Hence it should be chiefly applied to those parts lying between the bubo and the spot at which the matter of infection was absorbed; but in the ordinary seat of buboes the space lying between these points is not sufficient for the quan-

tity of mercurial ointment that must be employed. Where buboes form in the arm pit, or in the fore part of the thigh from venereal sores in the hand or feet, this may at all times be done; but when seated in the groin, besides rubbing the ointment on the parts lying between the chancres and the swellings, we also apply it along the inside of the thigh and leg. When the practice of discussing buboes with mercury was first introduced the ointment was chiefly rubbed upon the tumour, and in many instances a mercurial plaster was kept constantly applied to it; we find, however, that the mercury passes with much more certainty into the gland by applying it to those parts from whence the lymphatic vessels forming the gland take their origin.

But although a mercurial plaster applied upon the gland seems to do harm, by the heat and irritation which it excites, I am of opinion that a small portion of the ointment which we employ should be rubbed upon it. Although none of it should by this route pass directly into the substance of the gland, still it will go into the system, and the discussion of the tumours is in many instances evidently promoted by gentle friction applied to it.

In our application of mercury for the purpose of making it pass through a particular gland it is evident that a knowledge of the course of the lymphatic vessels is a matter of importance; but we cannot always apply it, as we have already observed, to those parts from which the greatest number of lymphatics of the contiguous glands originate. Thus in women, where the bubo is sometimes seated within an inch or so of the seat of infection, which is the case where the glands upon the round ligaments become obstructed, as the lymphatics forming these glands arise perhaps chiefly from the tender skin of the labia pudendi, we cannot with propriety apply the ointment to these parts; nor can we in most instances in the treatment of buboes in men take the advantages of those lymphatics which originate in the glans penis in the internal surface of the prepuce or scrotum; at least wherever I have attempted to do so, however gently the friction was applied,

so much irritation was induced by it that there was an evident necessity for desisting. In the scrotum it is very apt to excite a fretful itchy eruption, and a considerable degree of uneasiness. In all these situations, therefore, we must apply the ointment to the more firm skin of the contiguous parts.

When the full quantity of mercury to be employed can be rubbed upon the leg and thigh of that side in which a bubo is seated, it ought certainly to be done, but the cure of the disease often requires a greater quantity of the ointment than can be used in this manner. In such cases we commonly apply it to the other thigh, but it may with equal safety and advantage be rubbed upon the arms or any part of the body.

From what has been said, it will appear that we depend chiefly upon a proper application of mercury for the discussion of buboes; but we ought by no means to trust entirely to this. When the patient is plethoric he should immediately lose blood, in quantity proportioned to his strength, and his bowels should be opened by a brisk purgative. It proves sometimes serviceable to repeat the purgative once and again: Cold saturnine poultices should be applied to the tumour: The patient should be kept at perfect rest: His diet should be moderate; and where much irritation prevails opiates should be given in such doses as are sufficient for removing it. I think it right indeed to observe, that in the treatment of buboes much advantage may be derived from the use of opiates, and that mercury will often fail if we do not at the same time lessen or remove the irritation and pain, for which nothing answers with such certainty as the internal use of opiates combined with a frequent renewal of cold saturnine applications. In some instances I have made trial of local blood-letting by means of leeches for the discussion of venereal buboes, and in some cases with advantage. In others, however, it has not proved so serviceable as this remedy commonly does in swellings of these parts that proceed entirely from inflammation. On the contrary, the irritation excited by the bites of these animals has in some appeared to do harm.

By a proper application of the remedies that have been enumerated we endeavour to carry off any inflammation that may have taken place in the tumour, while by a due continuation of mercury we secure the safety of the constitution. The length of time to which a course of mercury should extend for this purpose can only be ascertained by the effects which result from it. It ought always, however, to be continued till the swelled gland is nearly reduced to its natural size; and when chancres take place along with it, the mercury cannot with safety be laid aside till the sores have been cicatrised for two or three weeks. But in attending to the discussion of the tumour we have no reason in any case to expect that it will be reduced altogether to its usual size; for lymphatic glands when swelled from this cause commonly remain for a great length of time, and in some instances during the life of the patient, somewhat more full and prominent than they were before. All we have to expect therefore is, that they should fall nearly to their natural size, and be entirely free of pain. This being accomplished, if no chancres or other symptoms of the disease exist, and if the full effect of the mercury has been kept up, it may with safety be left off at the end of a fortnight.

In buboes altogether venereal we commonly succeed in removing them by discussion, where the patient applies in due time and gives that attention which he ought to do to the application of the remedies; but in various instances we fail, and notwithstanding all our endeavours, the tumour proceeds to suppuration. This may take place from various causes, but it happens chiefly from patients delaying too long to ask for assistance; from their improper manner of living, and being allowed to walk about when they ought to be confined; from their not applying the mercury with that care and attention which it requires; and in many instances from the patient being of a scrophulous constitution; by which, although the syphilitic virus may be removed or destroyed by the mercury, still it is not sufficient for the purpose of carrying off that tendency to the formation of matter in the gland which the virus has produced.

As soon as a bubo shews any tendency to suppurate, it is the practice with many to endeavour to promote the formation of matter as speedily as possible; but I have not found that there is any good reason for this. By still proceeding with an attentive application of mercury, and with the use of cold applications, we frequently succeed in the discussions of these tumours after they have arrived at a considerable bulk, and in some instances even after some partial suppuration has taken place. Neither does any harm occur from the practice when it does not succeed; for although complete suppuration should afterwards take place, we do not perceive that the process is retarded by the mercury having been continued, while the sores which ensue heal more kindly than they usually do where the mercury has been previously laid aside. By some we are told, that the use of mercury, during the formation of buboes, ought never to be advised; but although I have paid much attention to the subject I have never perceived that in any instance it has done harm, while, besides other advantages, it saves a good deal of time which otherwise would be lost. Even where the formation of matter has taken place to a considerable extent, and where it is therefore proper to promote the complete suppuration of the tumour by the frequent renewal of warm emollient poultices and fomentations, still there is no necessity for desisting from the use of mercury, which ought to be continued without interruption till a sufficient quantity is employed for the safety of the constitution. It does not prevent the suppuration from going forward; and the sores which ensue from the discharge of the matter heal more readily, as we have already observed, when no interruption has been given to the exhibition of mercury.

When buboes have come to a state of suppuration it is a question with some whether they should be opened or not, for many have observed that they frequently heal easily when they are allowed to burst, by which the pain and terror of the operation is avoided. The result of my observation has been, that when buboes do not arrive at any great size we should proceed with the use of mercury till they burst of themselves, unless where the teguments are unusually thick; but when the substance of the gland is

entirely suppurated, as the matter, if thickly covered, would be a long while in getting out, and as it might in the mean time insinuate among the surrounding parts, in order to prevent the inconveniencies which this would induce, we ought certainly to make an opening into it; and in all cases of large buboes we should not hesitate in advising them to be opened.

Our object in opening buboes should be nearly the same as in other purulent collections. Such an opening should be made as will afford a free vent to the matter, but there is no necessity for making it larger. In very large buboes, indeed, the teguments are apt to be so loose and flabby, and the texture of the skin so much destroyed, that the cure would be rendered tedious was the skin allowed to remain. In such cases I sometimes discharge the matter with caustic, applied in such a manner as to destroy any part of the teguments that appear to be superabundant. This, however, is not often necessary; and for the most part I have found that an opening made from the centre of the tumour, where the matter commonly points down to the most depending part of it, is perfectly sufficient. Even a smaller opening than this would often answer; but it is better to make it of a sufficient size at once than to be obliged to repeat a very painful operation perhaps once and again, as is often necessary where buboes of a large size are opened with small incisions. I need scarcely observe that the opening should in every instance be continued down to the most depending point of the collection. From want of sufficient attention to this we meet with daily instances of the matter being allowed to collect, and in this manner to find access to the contiguous parts, by which a great deal of distress is induced, which, with due care at first, might easily have been prevented.

This I may observe is a point of the first importance in the treatment of buboes, but it does not often meet with that attention which it merits. Patients under mercury being for the most part highly irritable, they seldom submit easily to have buboes properly opened; so that although the lancet may be entered at the most prominent part of the tumour, which it ought always to be, the practitioner, if not firm and resolute, is often prevented from carrying

it to the most depending part of it, by which some space is left for the lodgement of matter ; and however small this at first may be, it seldom fails of becoming more extensive. This again gives rise to a great extent of ulcer, or to the formation of sinuses, which very constantly prove the source of much pain to the patient, and of distress and embarrassment to the surgeon.

When sinuses in this situation is superficial, and run little deeper than the skin, they are easily managed. No risk is incurred in laying them open, by which, if the constitution is healthy, a cure will be obtained on a sufficient quantity of mercury being given ; but they sometimes run deep, and pass so near to the large blood-vessels of these parts, that no attempt of this kind can with safety be made. In such circumstances all that art can in general do is to preserve the external opening of the sinuses sufficiently large, and by regular and equal pressure at the different dressings, to prevent as much as possible the matter from lodging. In some instances I have derived advantage from inserting, from time to time, a piece of caustic to the bottom of a deep sinus, and applying it gently over the whole internal surface of the sore. In others, the insertion of a small portion of ointment impregnated with red precipitate has proved useful. By removing the sloughs with which the surface of these sinuses are commonly covered, they thus excite a disposition over the whole to granulate and unite.

When buboes come forward to full maturation without much injury being done to the skin, I have in different instances, discharged the matter by the introduction of a small cord or seton, and the practice has succeeded. This requires, however, the teguments to be firmer than they commonly are when a bubo is ready to be opened.

It is universally admitted that it is of much importance to prevent the air from finding access to sores ; and as we sometimes observe buboes ooze out the matter which they contain by a number of small openings, and as these openings commonly heal easily, I conclude that they do so from their being so small as to exclude the air entirely. In different instances I have attempted to imitate nature, by making a number of small punctures with the point of a lancet over the whole extent of the bubo, and for the

most part with success. The matter in this manner comes slowly off; the sides of the abscess contract gradually; and when completely emptied, we find the whole parts that have been affected sufficiently firm without any sores or sinuses remaining.

When the patient has taken a sufficient quantity of mercury, if the constitution in other respects is sound, the sore in most instances heals easily, merely by dressing with common cerate, and by that attention to cleanliness which in the treatment of sores of every description is necessary. It often happens however that the cure of these sores proves tedious, notwithstanding all the attention that we can give to them. Their edges become hard, livid, and often re-torted; the matter thin, sharp, and foetid; and instead of healing, the ulceration gradually extends, or, if it heals in some parts it breaks out in others, giving a honey-comb appearance to all the contiguous parts. In some instances the tendency to this depascent kind of sore is so great that it soon spreads over all the under part of the abdomen, and upper parts of the thigh; in some cases by the matter being so acrid as to corrode and destroy all the contiguous parts with which it comes in contact, and in others by spreading beneath the skin, and bursting out from time to time in a variety of small ulcers.

The situation of patients with sores of this description is often very deplorable. The pain with which they are attended is commonly severe; the acrid matter which they afford being absorbed, hectic fever is thereby induced; the patient becomes hot and restless through the night; and almost a total want of appetite renders them soon much emaciated.

In such circumstances cicuta has sometimes proved useful; and in different instances the sores have been healed by it when no advantage was derived from any kind of ointment. In these cases it was applied in the form of poultices, commonly by mixing the juice of the fresh herb with emollient cataplasms. I have also observed that the recent expressed juice has, for internal use, proved more effectual than any other form of it. I have employed hyocyamus and bella-

dona fully, but seldom with any material advantage. Neither have I in these cases observed any obvious benefit from sarsaparilla; but in different instances mezereon, guaiacum, and sarsaparilla combined have proved useful, when exhibited in the manner I have already mentioned.

The most effectual course, however, which I have employed, is the application of caustic round all the edges and hardened parts of the sores, conjoined with the internal use of opium. For a considerable time I trusted entirely to dressings of the emollient kind, being afraid of irritating parts already highly sensible. In some cases a saturnine ointment has proved successful, and in others the common calamine cerate has answered; but in most instances, on those days in which caustic is not applied I have found more advantage from dressing with ointments prepared with a considerable proportion of calomel, red precipitate, or verdigris\*. In some cases it is necessary to sprinkle these articles over the sores in the form of powder, but for the most part they are sufficiently powerful when mixed with ointments. Instead of exciting pain, as those not accustomed to use them are apt to suspect, they commonly remove it; and they seldom fail to alter the discharge from a thin acrid sanies, to a well digested pus.

The application of lunar caustic indeed always excites pain at first, but this soon subsides, especially when the internal exhibition of opium is advised along with it. Indeed opium of itself proves often useful in sores of this description, not by acting, as some have imagined, as an antisyphilitic remedy but by removing, as I have already had occasion to observe, that pain and irritation with which sores discharging acrid matter are usually accompanied. By removing this state of irritability it destroys the disposition in the vessels of the sore to form that kind of matter, which, by its own acrimony, serves to perpetuate the ulceration; and this being accomplished, when no

\* Vide Appendix, Nos. 26, 27, 28.

other interruption takes place, nature alone seldom fails to complete the cure.

In some instances I have known sores in this situation which resisted every other remedy soon healed by being fumigated from time to time with cinnabar: In others warm salt-water bathing, and afterward the ordinary form of sea-bathing has proved useful; while in some a cure has not been obtained but with an entire change of regimen. Where the patient has previously lived upon milk and vegetables a moderate allowance of wine and animal food has proved serviceable, while those who have previously been accustomed to full living have derived much advantage from a diet consisting altogether of vegetables and milk. In all such cases country air proves particularly useful.

Where mercurial fumigations are employed for the cure of these sores they should be conveyed to the parts affected by metallic tubes, and kept applied to them for the space of twenty-five minutes or half an hour at once, and this should be repeated every second or third day, for six or eight times.

For some time past I have been making trial of the muriated barytes, a remedy lately brought into notice by the ingenious Dr. Crawford of London.\* These trials have been chiefly confined to sores and tumours produced by scrophula, but I have also made use of it in some of those spreading ulcers which we are now considering, after there was no cause to doubt of the syphilitic virus being eradicated, and in some instances I think with advantage. I have not as yet, however, given it in a sufficient number of cases to be able to speak of it with precision.

Besides this state of bubo there is another which in some instances proves very distressful, in which the tumour, after arriving at a considerable bulk, remains nearly stationary, and shews no tendency either to suppurate or dissolve, notwithstanding of all the remedies we may employ.

For the most part this indolent state of bubo depends upon the patient being of a scrophulous constitution; but whatever may be the cause, our first object should be to

\* Vide Appendix, No. 31.

employ that quantity of mercury which may appear to be necessary for rendering the system safe.

Uction affords here likewise the best form of using mercury; by making it pass through the diseased parts discussion of the tumour is more readily accomplished than when the medicine is given by the mouth. Even this, however, will in some instances be continued without any advantage for a great length of time. In such circumstances I have in various cases advised blisters to be repeatedly applied over the tumours. They never do harm, and in some cases they have proved evidently useful. In others electricity has proved serviceable, but it is necessary to continue it for several weeks in order to judge of its influence; and it ought to be continued longer at each time of applying it than is usually done. In four cases of indolent tumours where electricity proved successful, and two of these were of the kind we are now considering, no advantage was derived from the common way of using it. In all of these it was applied for the space of half an hour at once; this was repeated three times a-day, and at each application sparks were not only taken from the surface of the tumours, but gentle shocks were passed through them. For the first two or three weeks scarcely any alteration was perceived in any of them, but they all decreased suddenly at last. One of them of considerable size, which had been of eight months duration, and in some parts of which matter seemed to have formed, was reduced to the fourth part of its bulk in the course of a few days from the period at which it began to diminish. In this state of these tumours a long continued use of cicuta proves sometimes serviceable; and I have seen evident advantages from sea-bathing, and from drinking as much salt water daily as the patient can bear without being much purged.

Before entering upon the use of cold bathing I have in some cases advised warm salt water to be poured upon the swelling morning and evening, for the space of two or three weeks, and for the most part it has appeared to prove useful.

In the course of time buboes in this state sometimes become soft, and shew a tendency to suppurate, although they may not have done so before. It is here that I have ob-

served the warm gum plasters prove most useful. By stimulating the vessels of the diseased parts they seem to excite that kind of effusion which readily proceeds to a state of purulency.

But the most alarming circumstance to patients with tumours in this indolent state, is, a suspicion which they are apt to entertain that they may some time or other end in cancer. This is, however, so rare an occurrence, that it should scarcely give any cause of alarm. The phagadenic sores which occasionally succeed to buboes, and of which we have already taken notice, sometimes put on a cancerous appearance, but the real schirrus which terminates in cancer is rarely if ever the consequence of a venereal bubo. In different instances I have been consulted for indolent tumours in these parts on suspicion of their being cancerous, but I conclude that they are seldom or never of this nature, from all of them having done well where the patients have been persuaded not to meddle with them. They often indeed remain considerably enlarged for a great length of time; but when they do not ulcerate no danger is to be dreaded. Wherever parts in this situation, however, become cancerous, they ought to be extirpated while they remain in a moveable state.

### § 3. *Of the Cure of Venereal Ulcers.*

In the two preceding sections we have treated of the cure of chancres, and of those ulcers which succeed to buboes, both of which, but particularly the first, may be considered as primary symptoms of the disease, as they may take place without the system being in any degree injured. At present we have to consider the treatment of those ulcers which originate from the syphilitic virus having entered the constitution, and of which a description has been given in the second section of this chapter, page 34.

In the management of these ulcers our chief dependence is upon a well-regulated course of mercury; and I believe, that in general it is the best practice to trust in the first instance to mercury alone, and not to hasten the healing of the sores by any other means than the application of mild dressings and due attention to cleanliness. Under this treat-

ment we rest assured that the cure is altogether accomplished by the destruction of the virus, which must always be a more doubtful question where caustic remedies have been employed.

There are some exceptions, however, to this, and I consider it as of much importance in practice that they be kept in view. Venereal sores may be so situated, and in such a state that their farther progress may be attended with the loss of parts materially necessary for life, or for the future comfort of the patient, as is the case with ulcers that have already penetrated deep in the throat, mouth, nose, lips, or face. In all these situations, particularly in the throat, nose, and lips, they usually proceed with more rapidity than in other parts of the body, so that by trusting to the internal use of mercury alone such a destruction of parts often takes place as proves afterwards highly distressful. On this account the cure ought to be hastened as much as possible by the use of such dressings as we find from experience prove most effectual; and no harm can ensue from this being conjoined with whatever quantity of mercury may be required.

In all sores truly venereal, wherever they may be situated, the parts are most speedily brought to a healing condition by a free application of caustic, but the practice has seldom, I believe, been considered as applicable to ulcers in the mouth, throat, or internal parts of the nose. For many years past, however, I have been in the practice of using caustic as well as other escharotics in the cure of these ulcers with the greatest freedom. No danger has ever ensued from it; and in various instances it has contributed to save the uvula and other parts of the throat, which otherwise were in great danger of being destroyed. Caustic fixed in a tube six or seven inches in length may be easily conveyed to any part of the mouth or throat, and the tube answers the purpose whether it be curved or straight. Caustic excites less pain in these parts than it usually does in other parts of the body, and it seldom fails to remove the irritation which accompanies these ulcers, and in this manner to dispose them to heal. One application seldom proves sufficient. Till the mercury has completely entered the system, it requires to

be repeated once and again, perhaps every second or third day, and in the intermediate days I cause the parts to be touched occasionally either with a weak solution of corrosive sublimate or with a strong impregnation of honey with mercury, which in all sores of this description is a very useful application.\*

In the description which I have given of the venereal fore throat, page 30 of this volume, I have endeavoured to point out marks of distinction between it and affections of the throat, the consequences of other causes, and particularly those by which it may be distinguished from ulcerations of the mouth and throat which mercury is apt to induce. Among other means of distinction may be mentioned the different effects produced upon them by caustic. In the true venereal ulcer, after the first irritation which it excites is over, a good deal of relief is obtained from it, and the parts soon assume a clean healing appearance; whereas, in sores induced by mercury the application of caustic not only gives very intense pain at first, but this is apt to continue for a considerable time, while the sores retain nearly the same appearances, however frequently the remedy may be repeated.

In the nose and outer parts of the lips, these ulcers besides being touched with caustic, may be dressed with ointments impregnated with calomel, red precipitate, and even with verdigris; but these remedies are inadmissible to the throat and inside of the mouth from the danger that would ensue from their passing into the stomach.

Even in venereal ulcers of other parts of the body we are often obliged at last to employ remedies of this class. For the most part they become clean soon after mercury is taken in sufficient quantity for rendering the mouth sore, and they frequently heal, merely by continuing the course of mercury for a sufficient length of time. But this does not always happen; for although the sores may become clean, and even contract, they are very apt to become stationary at last;

and do not show any disposition to heal, however long the mercury may be continued. When we perceive this to be the case, the mild dressings which we employed at first should be laid aside. The parts should be completely touched with lunar caustic every second or third day, and at other times dressed with calomel, or red precipitate ointment. In some cases we succeed by bathing with a weak solution of corrosive sublimate, or verdigris; but the ointments for the most part prove more effectual.

By thus connecting a regular attention to the external management of the sores, with a due perseverance in the use of mercury, we very commonly prove successful at last; but even this does not always answer. In some instances, the ulcers instead of becoming clean and putting on a healing appearance, remain foul and equally extensive as at first.

In such circumstances we sometimes succeed by changing the preparation of mercury, and in others by making some variety in the dressings applied to the sores. We should not, therefore, rest satisfied with one mode of treatment, but where no advantage is obtained from the second or third variation of the remedies, particularly if the caustic has been sufficiently powerful, and the mouth kept for a due length of time completely sore with the mercury, we may in that case be assured either that some other disease prevails in the system or that the sores are rendered obstinate by an affection of the contiguous parts.

Scrophula and scurvy are the diseases of the constitution by which the cure of these sores is most apt to be obstructed. Venereal ulcers will no doubt heal in scrophulous constitutions. Of this we have daily instances; but it is equally certain that the contrary often happens, and with such certainty does scurvy obstruct the operation of mercury that a cure can scarcely be obtained as we have already observed, of any of the more inveterate symptoms of syphilis while the scorbutic diathesis exist in any considerable degree. Where either of these diseases is therefore found to be the cause of our failure, those remedies must be

employed which prove most successful in removing them, but having already in different parts of this work had occasion to speak particularly upon this subject, it will not here be necessary to consider it farther.

The local affection which occurs as the most frequent impediment to the cure of these sores, is a diseased state of the bones above which they are seated, or of the membranes covering these bones. In either of these cases, although the virus of the disease may be eradicated by a course of mercury, still the sores will continue foul, nor will they show any tendency to heal, however long the mercury may be continued. Ulcers of this description being frequently connected with this diseased state of the parts beneath are often the cause of more mercury being employed than would otherwise be judged necessary, for we are too apt to suppose that all such sores as were at first produced by Lues Venerea are to be cured by mercury alone; an error that has been the cause of much mercury being very unnecessarily given.

Whether the bone, or only the periosteum be at first affected, our practice must be nearly the same; for in such circumstances, where the periosteum is so much diseased as to resist the effects of a full course of mercury, there must ultimately be a partial exfoliation of the bone beneath, before a permanent cure will take place. The soft unhealthy granulations with which sores in this state are apt to be covered must be destroyed with proper escharrotics, and the exfoliation of the bone must be promoted by all such means as usually prove most effectual for that purpose, and for which books on surgery may be consulted. I may here shortly observe, that the best escharrotic I have employed for the destruction of these fungous excrescences which sprout upon the surface of the diseased bones is a combination of red precipitate and calcined allum, which proves much more powerful than either of these articles when used separately, and more ef-

fectual even than caustic in the usual way of applying it\*.

On the diseased parts of the bone being removed a cure will soon take place if a sufficient quantity of mercury has been given ; otherwise the sore will assume the usual appearances of a venereal ulcer, and will not heal till another course of mercury is advised.

With respect to the quantity of mercury to be given for the cure of venereal ulcers, this must at all times be regulated by the effects which result from it, and these again will in a great measure depend upon the duration of the disease. When the disease has been of short continuance, and the sores heal easily without the assistance of external applications, the mercury, if given in full quantity, need never be continued above three weeks after they are cicatrised ; but we should proceed with it for the space of a month where the system has either been long infected, or where we have judged it necessary to heal the sores quickly by the application of caustic or escharrotics. Thus, in an ulcer in the throat, which we might suppose would require the patient to be under mercury for the space of a fortnight, merely in order to cicatrise it, and for another fortnight, that is, for the space of a month in all, in order to render his constitution safe, if by the application of caustic the ulcer shall be cicatrised in a week, the mercury should be persisted in for a month thereafter, or for five weeks in all.

By some it has been doubted whether it is necessary to persevere in the use of mercury after the symptoms for which it is given are removed ; but these doubts have only been suggested by those, who, from want of sufficient experience are not capable of judging, or by others who in the support of a theory which they have adopted, allow their judgments to be so far perverted that they lose sight of every fact and argument that militates against it. There is nothing more certain than that venereal ulcers, as well as every other symptom of the disease, may be completely

\* A prescription is given for this article No. 44, Appendix to Vol. R.

removed by mercury, and yet that the disease will return in the same or some other form, if we do not persist in the use of mercury for some time thereafter; that is, the disease itself may be cured while the disposition remains. All the symptoms may be carried off entirely, and yet the virus subsist in such force that they will at some future period break out again. The length of time to which the use of mercury should be protracted for removing this disposition it is not always easy to ascertain. In this and some of the preceding sections I have mentioned the result of my own experience upon this point, but this can only be done in general terms, and the quantity of mercury to be given in any particular case must in a great measure be regulated by the judgment of the practitioner in attendance.

Towards the close of a mercurial course employed for the cure of venereal ulcers of long duration, decoctions of sarsaparilla, mezereon, and guaiacum are sometimes given with advantage. The latter I have already mentioned as the most effectual of these, but in some instances a combination of the whole has appeared to prove more powerful than any one of them used separately. Many alledge that no advantage is derived from any of these; but although I was once of this opinion I am now perfectly convinced that ulcers of this description frequently heal more easily when a mercurial course is conjoined with a decoction such as I have mentioned, than when the mercury is given entirely by itself.

In these ulcers, when much irritation prevails, opium proves particularly useful. I have in various instances, indeed, found that all other remedies are of no avail till this irritability of the parts is removed. In some cases this may be done with hyocyamus. Three or four grains of the extract given at bed time very commonly acts as an anodyne, and I conclude that cicuta, when it proves useful here, acts also in this manner; but when the irritation is considerable opium is the only remedy upon which we can depend. It ought therefore in all cases to be given where the sores do not soon become perfectly easy on the mercury taking full effect, and which they commonly do when they are altogether venereal.

§ 4. *Of the Cure of Venereal Blotches.*

A description of this symptom is given in Section II. of this Chapter, p. 41.

Almost the only remedy employed for the cure of venereal blotches is mercury, and when the course is well conducted it seldom fails. We never find it necessary to have recourse to external applications unless the eruptions become hot and uneasy, in which case relief is sometimes obtained from dusting the parts with flour or starch powder, as is done in cases of erysipelas.

Where the usual method of exhibiting mercury has failed in the cure of these eruptions, corrosive sublimate has appeared to prove useful; but as the medicine in this form cannot be given in large quantities, it requires to be continued for a great length of time. It should be regularly given for at least six weeks after the blotches have disappeared; and it seems to operate with most certainty when conjoined with the decoction which I have just had occasion to mention. The Lisbon diet-drink is said to have proved particularly useful in the cure of this symptom.\* Antimonials, from their well known property of exciting a determination to the skin, are frequently combined with mercury in the cure of venereal blotches. Upon this principle I conceive to be formed many of the quack remedies generally employed in cutaneous affections; and it is for the cure of this symptom of syphilis that Plummer's pill has been most frequently used.†

Crude antimony is, in cases of this kind a favourite medicine with some practitioners, and when conjoined with mercury I think I have observed it prove useful. It may be given either in powder or pills, to the extent of fifteen or twenty grains three times a-day; and besides being given along with the mercury, it may be continued with advantage for two or three weeks after the mercurial course is over.

\* Vide Appendix, Vol. I. No. 4.

† Vide Vol. II. No. 21.

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§ 5. *Of the Cure of Nodes, Swellings of the Periosteum, &c.*

A description of these swellings has already been given in section II. page 52; and it is of importance in the method of cure to distinguish them accurately.

In all the affections to which the periosteum and bones are liable from the syphilitic virus, mercury ought to be given immediately, for it is upon this remedy that we chiefly depend. Where the bones are much swelled, that is, where tumours truly osseous have arrived at any great bulk, mercury alone will not prove sufficient; for although it may destroy the constitutional infection, these tumours will remain, but when given immediately upon their first appearance, it will prevent their farther increase; and as they are always small at first, although they may never disappear entirely no inconvenience will be experienced from their remaining in this state, even during the life of the patient.

The method of throwing mercury into the system by unction is the best adapted for this symptom, as it is perhaps with a very few exceptions for the cure of every symptom of the disease; but it does not appear that any advantage is derived from rubbing the ointment upon the tumours. On the contrary, by tending to irritate and fret the skin, it renders them more painful, so that it answers better to apply it to other parts.

As the bones seldom become affected till the disease has been of long duration, it is perhaps for this reason that more mercury is in general required for the cure of this symptom than for any other syphilitic affection. I believe, however, that we are often deceived in this, and continue to give mercury for the cure of the local affection long after the virus by which it was produced is eradicated, and for which purpose alone it was prescribed. Next to the state of the system, which we render safe by a due continuation of the mercurial course, the pain excited by the tumour is the symptom which chiefly requires attention.

When the mercury is employed immediately upon the swelling taking place the pain commonly subsides soon; but if the tumour has previously arrived at any considerable bulk, the pain which it excites is apt to be severe, while it is not allayed or even lessened by all the mercury we can employ. Where the skin has become inflamed and painful, some relief will be obtained from saturnine applications; but as the pain depends chiefly on the stretching of the periosteum by the tumour of the bone, whenever it becomes severe nothing will prove effectual but the division of this membrane. No practitioner would lay a bone bare for a moderate degree of pain, whatever the cause of it might be; but whenever the pain produced by nodes becomes distressful, and is not allayed by a course of mercury, as I know of no other remedy that will give relief, I conclude that we are fully justified in advising an incision to be made completely through the periosteum, along the whole course of the tumour.

Where the bone is not so much increased in bulk, and not otherwise diseased, if a sufficient quantity of mercury has been given for the destruction of the virus, a cure may be obtained without any part of it exfoliating. With which view the mildest dressings only should be employed, while the sore is protected as effectually as possible from access to the air. But, when the tumour of the bone is considerable, and particularly when caries has taken place, as it would be vain to expect a cure but with the exfoliation of the diseased parts of the bone, so all such means should be employed for effecting this as are known to be most powerful. Any of the soft parts covering the diseased part of the bone should be removed with escharotics. Small holes should be drilled through the carious part of the bone, and the sore should be dressed with precipitate or verdigris ointments, of such a strength as to act gently as stimulants upon the contiguous parts. By due perseverance in this mode of treatment, and taking care at the same time to support the strength of the patient with a nourishing diet, the diseased parts of the bone will at last exfoliate, when the healing of the sore not being impeded by any other cause, a cure will soon be obtained with common treatment.

The next variety of tumour taken notice of in the description which I have given of nodes, proceeds, as we have

had occasion to see, from the effusion of a thin fluid between the periosteum and surface of the bone. This also is apt to be accompanied with severe pain; but as the pain is induced by the distension of the periosteum, in consequence of a fluid being collected beneath, and as this fluid is frequently absorbed on the mercury taking effect, we seldom find it necessary to lay this variety of tumour open. Absorption of the matter is sometimes promoted by the application of a blister to the part, or by rubbing it occasionally with stimulants, such as volatile liniment or tincture of cantharides. But when the swelling has been of long duration, as the surface of the bone is in this case commonly injured, as the absorption of the matter does not take place so readily, and as the tumour at the end of the mercurial course is commonly larger than before, an incision the whole length of the tumour should be made through the periosteum, and the wound dressed in the manner just now advised. I think it right, however, to observe, that the opening of these tumours is very seldom necessary; and that it would in no instance perhaps be so if mercury was given in sufficient quantity soon after their formation. Even where the quantity of effused fluid is considerable, the swelling for the most part begins to lessen soon after the mercury has fully entered the system; and if the effect of the medicine is kept up for a sufficient length of time we seldom fail in removing it entirely.

In those diffused swellings upon the bones which I have taken notice of in the description as a symptom of syphilis, and which also have improperly been termed nodes, mercury, when properly given, seldom fails to effect a cure; but it requires to be given in as large quantities as the patient can bear, and to be continued for a considerable time, commonly for nine or ten weeks. The pain indeed soon subsides upon the mercury taking full effect; but when the swelling has been of long continuance, as often happens before mercury is given, from the disease being at first apt to be mistaken for rheumatism, in order to remove it the mercury must be employed for several weeks after the pain has ceased. In the treatment of this symptom blisters prove particularly useful, and they should be applied along the whole course of the swelling.

Where the ligaments, tendons, and fasciæ of muscles, become swelled, as sometimes happens from the matter of venereal ulcers spreading to those parts from the skin and cellular substance where they originate, we depend entirely upon a course of mercury, with proper attention to the external treatment of the ulcers in the manner we have already pointed out.

§ 6. *Of the Cure of Venereal Excrescences about the Anus.*

In section second of this chapter, a very particular description has been given of these excrescences.

A full mercurial course is the remedy for these excrescences, under which they gradually lessen, and at last very commonly disappear altogether; but where we are disappointed in this, we must use the same applications recommended for the removal of the warty excrescences which succeed to Gonorrhœa.\*

The disease being now entirely local, no advantage can accrue from mercury being longer continued, while we seldom fail with a proper application of escharotics.

Where the surface of these excrescences becomes ulcerated, and yields matter, saturnine lotions and other astringents should be employed to heal them; for as the matter which they afford appears to be venereal, and of which we judge from the real venereal bubo being in women sometimes produced by it, the longer that this secretion is allowed to continue the more of it will pass into the system, and the greater the risk will therefore be of some of the glands in its course towards the heart being obstructed.

§ 7. *Of the Cure of the Venereal Swelled Testicle.*

For the description of this affection of the testicle, and of the difference between it and other tumours

\* Vide Chapter III. Section XIII. Vol. I.

to which the testis is liable, I must refer to section second of this chapter.

One important difference between this tumefaction of the testicle and that which proceeds from Gonorrhœa is, that in the latter mercury very frequently does harm, while in this it is the remedy upon which we chiefly place dependence. Unless the swelling has been allowed to advance to a great size, from an opinion which some have entertained that it is always of a local nature, and not connected with diseases of the constitution, mercury seldom fails to cure it. Were it not to add considerably to the extent of the present work, this, as well as many other points, of which I have had occasion to take particular notice, might be illustrated and proved by a variety of cases which have fallen under my observation, in which the swelling of the testis to which I allude, produced altogether by the syphilitic virus in the system, and in many instances where Gonorrhœa never existed, after resisting every other remedy, has at last been completely cured by mercury. Besides other views of no small importance in the theory of the disease, which this tends to establish, it may be looked upon as an additional argument for considering the matter of Gonorrhœa and of pox as different. The swelling of the testis which occurs in Gonorrhœa yields entirely to the effects of an antiphlogistic course and without doing an injury to the constitution, while the other in no instance has been known to do so, and gives way only to that remedy which we know by experience is alone to be trusted for the cure of every other symptom of syphilis.

Mercury even proves effectual in removing those tumours in which matter has formed. I have met with several cases in which a partial suppuration had taken place in the body of the testis before mercury was given, and the matter has been absorbed, and the swelling entirely removed soon after a sufficient quantity of the medicine has been thrown in. In some I have thought that mercury was assisted by a decoction of mezereon being given along with it; but it is for the most part abundantly successful by itself.

Where the use of mercury has been too long delayed the swelling commonly suppurates, and the sore which ensues from the bursting of the tumour assumes always a very ugly appearance. Even in this situation, however, our chief advantage is derived from mercury; nor do we often fail in curing the sore if due attention is given to regular dressings, and procuring a free discharge of the matter. The best dressings for this purpose are the saturnine and zinc ointments when the parts are clean, and the precipitate or verdigris ointments when they are foul or sloughy.

But where matter is observed to lodge in any part of the swelling, nothing can be of advantage but making a free opening into it. This, however, is not always done so completely as it ought to be. The testes being organs of much delicacy, we are apt to be afraid of opening any abscesses that may form in them, in consequence of which the matter is apt to find access into the cellular substance of the scrotum, where it seldom fails to produce very troublesome sinuses. This however, may always be prevented, either by making a free incision into the most depending part of the abscess, without allowing it to burst, or taking care to enlarge the opening if it has previously made way for itself. Nor should we ever be afraid of doing so, for the injury which this may do to the testicle cannot be equal to what it must suffer from matter being allowed to lodge in it. In all such circumstances I never hesitate to lay the testicle freely open, and no inconvenience ever ensues from it.

As this affection of the testicle never occurs but in very advanced stages of syphilis, it requires a very considerable quantity of mercury to remove it, and at the same time to eradicate the virus from the system by which it has been produced. It ought to be continued from ten to twelve weeks, and in as great quantities as the patient can bear.

When the sores which ensue from the bursting or opening of these tumours do not heal after such a quantity of mercury is exhibited as we judge to be proper for the safety of the constitution, some advantages is

occasionally derived from a plentiful use of hemlock, and from sea-bathing; but in such circumstances nothing proves for the most part so useful as dressing the parts in the manner I have mentioned with stimulating ointments, and touching them occasionally with caustic. This we are also apt to be afraid of from the natural irritability of these parts; but I have not found that there is cause for this. On the contrary, a free application of caustic to the surface of these sores renders them for the most part less painful. Where much irritation however prevails, and is not removed or much lessened by the use of caustic, opiates must be given in such quantities as are sufficient to allay it.

*Of the Treatment of Alopecia, Venereal Blindness, and Deafness.*

A description of these symptoms was given in Section II. of this chapter, § 11. 12. and 13.

When alopecia, or the falling off of the hair takes place in any considerable degree before mercury is employed, particularly if the patient is advanced in years, it never grows again but in very small quantities; but during youth, and when mercury is given in the commencement of this symptom, we not only prevent it from advancing farther, but any hair that has been lost will very commonly be renewed. There is scarcely indeed any other remedy upon which we can depend but a full course of mercury; for although many external applications are recommended to recover or renew hair lost in this manner, there is no reason to suppose that any advantage is derived from them.

Where the falling away of the hair is connected with a scurf over the head, some benefit indeed is obtained from the application of external remedies; by removing the eruption we tend to prevent any farther loss of hair, and the internal use of mercury alone is not altogether sufficient for this. The most effectual applications for the removal of this are the unguentum citrinum,\* and a weak solution

\* Vide Appendix, No. 14.

of corrosive sublimate in water. When the former is used the parts should be rubbed with it once a-day. The latter may be applied three or four times daily, in the proportion of half a grain of the mercury to an ounce of water; and for the more effectual application of these remedies, the head should be shaved, and the hair not allowed to grow till the eruption or scurf is entirely removed.

In the treatment of blindness as a symptom of Lues Venerea, we have scarcely any variety of practice. Mercury is perhaps the only remedy from which any advantage is to be expected; nor does it prove of any avail if it be not given immediately, and in as great quantities as the patient can bear. Whether the eye is therefore affected with gutta serena, cataract, or effusions upon the cornea, where there is the least reason to suppose that the affection proceeds from Lues Venerea, the patient should be immediately put under a complete course of mercury, and his mouth kept fully affected for the space of ten, eleven, or twelve weeks, according to the effects which may arise from it.

In gutta serena it may be proper before mercury is given to premise a smart purgative or two, and during the course to conjoin the repeated application of blisters to the temples and head, with electricity, and errhines for the purpose of exciting a discharge by the nose, although the effects of these remedies are so uncertain that in every instance our chief dependence must rest upon mercury.

Where the blindness is found to proceed from cataracts, if mercury does not succeed in removing the opacity, our only remedy must be the usual operation of depressing or extracting the chrySTALLINES. This will not always succeed, but where the eye is otherwise sound, and only the local affection of the lens appearing to be the cause of blindness we ought in every instance to advise it.

We sometimes find that mercury here proves so far useful as to lessen the opacity of the lens in a considerable degree, without removing it entirely; and where this has happened I have found in more instances than one that a cure has been accomplished by electricity. I have never perceived, however, that electricity has produced any advantage where the opacity was not previously much diminished.

nished, and even in this situation it requires to be long continued in order to prove effectual.

In blindness produced by the humours of the eye becoming confused or turbid, where it is known that this proceeds from the system being affected with syphilis, the patient ought no doubt to be put under mercury; but this cause of blindness is of a very hopeless nature, for I have never known an instance of its being removed. Neither do we prove very successful even with mercury, where vision is affected by the matter of syphilis fixing upon the coats of the eye. We may prevent the disease from advancing much farther, but mercury does not appear to be sufficient for removing any considerable degree of opacity in the cornea that has already taken place. Nor does this cause of blindness admit of remedy by means of a surgical operation; for it is not upon the surface, but in the very substance of the cornea that it is seated.

When abscesses form in the coats of the eye, we have it in our power by discharging the matter which they contain to remove in some degree the deformity which they produce, as well as the pain with which they are accompanied; but we are not to look for any farther advantage from this or any other remedy that can be proposed.

Of all the symptoms of Lues Venerea, none prove more obstinate, nor are less acted upon by mercury than deafness. A certain degree of deafness, indeed, produced by venereal ulceration or swelling at the opening of the Eustachian tube in the throat is sometimes relieved or even removed by a course of mercury; but no advantage is ever obtained from this or any other remedy where the disease has fixed upon the membrane or bones of the ear. In the description of this symptom, I had occasion to remark, that a temporary deafness is sometimes produced in Lues Venerea by the meatus externus being filled up by a scurfy eruption; and in some instances, by the membrane of the passage becoming thickened and even ulcerated. In this, as in other symptoms of the disease, we depend entirely on the internal use of mercury for removing the virus from the constitution; but the local affection may remain after the system is rendered safe. The best remedy I have employed for this is a cautious use of bougies. Care, howe-

ver, must be taken that they be not pushed so deep into the passage as to injure the tympanum; and they ought to be formed of the mildest materials, as they never fail to do harm when they excite much irritation.

§ 9. *Of the Cure of some Anomalous Symptoms of Lues Venerea.*

In section second of this chapter, page 69, sundry anomalous symptoms of syphilis are enumerated which could not with propriety be described in any of the preceding sections.

For the cure of these we depend almost entirely upon a full course of mercury. Scarcely any of them occur but in the later stages of the disease, and they are very apt to recur, if the medicine be not given in as large quantities as the patient can bear and continued for a considerable time after they have disappeared. Besides this general course of treatment, some of these symptoms require a peculiarity of local management.

The first that I have mentioned are these chops or clefts in the palms of the hands and soles of the feet to which syphilitic patients are sometimes liable. The best dressings that I have employed for these are the unguentum citrinum,\* and unguentum e mercurio precipit. Rubr.†. But while these ointments are perhaps the best that can be applied to the chops themselves, they are too irritating to admit of being applied to the contiguous parts, which for the most part are red and tender, and which are best defended by the unguentum saturninum.‡

For the removal of that scurf and gummy matter which occasionally forms and becomes very troublesome upon the eye-lids of syphilitic patients, I have found nothing answer so well as bathing them from time to time with a weak solution of white vitriol, and applying over the eye-lashes and cartilaginous border of the eye-lids a small portion of the calamine liniment,§ or unguentum citrinum, so much reduced with axunge as to prevent it from exciting too much irritation.

\* Vide Appendix, No. 14.

† No. 27.

‡ Vide Appendix, No. 29.

§ No. 31.

The sores which succeed to the swellings described in p. 70, are frequently healed by mercury alone, but in some instances they resist even this and all the dressings we can employ. Caustic and other escharotics prove to be the best applications here, as we find them indeed to be in almost every variety of venereal ulcer. When they do not succeed, it is for the most part owing to a greater degree of irritation and pain in the sore than is consistent with the process of healing. In this case nothing proves so effectual as sufficient doses of opiates.

When the pains mentioned in p. 22 do not give way to that quantity of mercury which we judge to be sufficient for the safety of the constitution, we sometimes find that they may be removed by blisters applied directly to the parts affected, and anointing them with æther, anodyne balsam, or volatile liniment.

For the removal of these pains we are often obliged to have recourse to opium. In sufficient doses it seldom fails by itself, but it proves more effectual in every variety of pain when given in the form of Dover's powder. Ten or twelve grains of the powder given at bed-time, and continued for seven or eight nights successively, very commonly affords effectual relief.

The irritability, restlessness, and atrophy to which venereal patients are not unfrequently liable, are often difficult to remove, and sometimes even prove fatal. I have known different instances of these symptoms proving incurable where ulcers and other symptoms of the disease with which they were at first connected were easily removed, but where the patient by constant restlessness and anxiety, having first been deprived of his appetite, and afterwards of strength, was at last carried off, notwithstanding all the means that could be employed for his safety.

I judge that these symptoms are in many instances altogether venereal, from observing them accompanying other well-marked symptoms of the disease, and from mercury being the only remedy that has any influence in removing them. Even mercury will not always succeed; but in various instances I have known it prove effectual where every other remedy had previously been tried in vain. Peruvian bark, a change of diet, and country air, are com-

monly prescribed; but we may readily conclude that no material advantage can result from them if the mercurial course be not also continued till the virus is eradicated.

This restless anxiety to which syphilitic patients are occasionally liable, is in some instances very effectually removed by opiates, while in others these remedies rather do harm. The only course that I have found to prove useful, is, a light, nourishing diet, a due continuance of mercury, and the patient, during the time of using it, being allowed to go daily abroad in a carriage when the weather is not cold or damp.

In the use of mercury for the cure of this symptom the greatest nicety and care are required; for in the delicacy of constitution which prevails here it constantly does harm, if not managed with much attention. It cannot be given in large doses but with much risk of doing harm; nor can it be laid altogether aside without the disease gaining ground. If ever an alterative course of mercury, as it is termed, is proper for any of the symptoms in the more advanced stages of syphilis, it is here. By a regular exhibition of small doses of mercury the virus may be kept moderate till the strength of the system is so far restored by attention to regimen as to admit of larger quantities being given.

The most frequent anomalous symptoms in this disease is fever. It is often the effect of some evident symptom, such as bubo, ulcer, or node. In such cases the cause is obvious, and the fever disappears along with the symptom by which it was induced. But where a quantity of mercury sufficient for eradicating the disease has not been given, although all the symptoms for which it was employed may be removed, yet fever will sometimes take place, and in some instances subsist for a considerable length of time before any external mark of the disease is perceived. This I know is doubted, and even denied by many; but I have met with it frequently, and in some instances distinguished in the most obvious manner. In some where from the history of the case the cause was evident, the patient has been cured by an additional

course of mercury while in others, from no cause of suspicion being mentioned, the febrile symptoms resisted all the usual remedies, and were not removed at last till the appearance of nodes, ulcers, or some other local symptom has pointed out the necessity of a farther prosecution of mercury.

The effect of mercury upon this fever is often remarkable. In almost every other situation it is one of the first effects of mercury in a certain degree to accelerate the circulation of the blood, while here it not only lessens the quickness of pulse, but abates every other febrile symptom. Even in small quantities mercury proves useful here, as it evidently does in the symptom last mentioned; and as the strength of the patient is commonly much exhausted before this remedy is employed it should not at first be given in larger quantities than is merely necessary for mitigating the symptoms. This, however, not being sufficient to render the constitution safe against future returns of the disease, care should be taken that a sufficient quantity of the medicine is exhibited as soon as the patient's strength, restored by a nourishing diet, enables him to bear it.

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## S E C T. VI.

### *Of Lues Venerea in Infants.*

NO period of life is exempted from the ravages of the venereal disease. They are frequently to be deplored even in infancy, and here the same symptoms appear as in a patient of more advanced years; that is, when the virus enters the system in the usual way from the surface of the body, the symptoms which ensue are nearly or entirely the same as in other periods of life; but when the disorder is communicated to the fœtus in utero, some variety is observed which demand particular notice.

We have already indeed had occasion to remark, that it has been doubted whether Lues Venerea can be communicated to the fœtus in utero. Nay, of late it has been asserted that it cannot, and that practitioners upon this very important point have hitherto been mistaken. But this is so contrary to general experience, and to the result of my own observation, that I cannot consider it as an opinion that will ever gain ground where the judgment is not entirely warped. A desire to support a particular theory seems to have laid the foundation of this doctrine; but the facts which militate against it are too strong and too numerous to admit of being easily set aside\*.

Those who are of opinion that neither the blood nor any of the secretions of a syphilitic patient can communicate the contagion, alledge, that when a child appears to have been infected in utero, the infection must have been communicated during labour from venereal sores in the genitals of the mother.

That this in some instances happens there is no reason to doubt. A child passing over, and perhaps resting for a considerable time upon sores of this kind, may readily be infected in this manner, and this may probably be the case in most of those instances where the disease does not appear till two or three weeks after birth. But where a child is instantly upon delivery found to be covered with a venereal eruption, and which I have met with in various instances, the infection must necessarily have been communicated a considerable time before birth. It may be asked, however, in what manner eruptions appearing on the birth of a child have been known to be venereal? In answer I may observe, that it has been ascertained in the most obvious manner, by finding on enquiry that the father had been poxed without taking such a quantity of mercury as was necessary to eradicate the virus: by the eruption upon the child being exactly similar

\* Even Mr. Hunter has unguardedly fallen into this error; and as his authority would necessarily have influence with those whose opportunities for observation are not so great, I think it right, in a matter of such practical importance to endeavour to render the mistake obvious: see different parts of Mr. Hunter's Treatise.

to what experience in other instances shews to be venereal; by a child in this situation giving the different symptoms of Lues Venerea, evidently and strongly marked, to the nurse by whom it has been suckled; by the nurse giving the disease in the first place to another child, and afterwards to her husband, and by the disease in all of them being cured by a proper use of mercury alone, while no other remedy is of any avail.

Every practitioner must have met with instances of this. I have seen many, in some of which no external mark of the disease appeared either in the father or mother, although one or other of them, and in some cases both, must have been infected. I conclude that we have sufficient evidence of this where the same parents produce one, two, or more pocky children, and continue to do so till both pass through a complete course of mercury; and hence, notwithstanding any theoretical opinion that may be advanced to the contrary, I have much reason to imagine that the opinion which I have elsewhere given, that the semen of a diseased parent will give a pocky offspring is well founded. No person, I believe, will doubt of other diseases being communicated in this manner. We have daily proofs of it in gout, pthisis, scrophula, and, perhaps, in some others, in which these diseases descend from fathers to their children, while no infection is communicated to the mother; and I have met with very decisive evidence of it in Lues Venerea, at least with such as leaves no room with me for doubt.

About ten years ago I was desired to visit a child seven or eight days old. It was covered with a rash, which had much the appearance of being venereal; and finding that the only other child which the parents ever had was born with a similar rash, of which it died, I enquired of the father of the child whether there was any cause to suspect that he was infected or not. He informed me that he had been poxed about six months before his marriage; that his symptoms were chancres and a sore throat; but that having taken as much mercury as was judged to be sufficient, the symptoms having disappeared while under the course,

and none of them having ever occurred again, although he had now been married nearly three years, he could not possibly believe that the child was infected with this disease, particularly as no symptom had appeared upon his wife. I was clearly of opinion, however, that the child was infected; and I judged it right to say, not only that the child should instantly get mercury, but that he and his wife should also take it, with a view to prevent the same occurrence with any other children which they might have, as well as to render themselves safe. He agreed to this with respect to himself, but on account of the suspicion which it might create, he would by no means consent that it should be given to his wife. Imperfect as this measure might be I was obliged to adopt it. Small doses of calomel were given to the child, and the father was kept under a complete course of mercury, with unction and the blue mercurial pill, for the space of ten weeks. The child got well; and although the same parents have had several other children since that period, all of them have been perfectly sound. Some doubt, however, might still have remained of the real nature of this rash, but it happened that a very decisive, although unfortunate proof was given of its being venereal. Two nurses were infected by the suckling of this child. The first became so much distressed with ulcers upon her nipples, and pains in one of the mammæ, that she was obliged to leave the family, and although warned of her situation, and of the necessity of giving no suck to other children till the course of mercury which she was put under was finished, she foolishly took home her own child, which she had previously given out, and in the course of two or three weeks he also was poxed, and being a weakly child, he soon died, although the greatest care was taken of him. The nipples of the other nurse ulcerated, and she was soon thereafter seized with a venereal ulcer in the throat, for which a course of mercury became necessary. Since that period, besides some instances in which the disease was given to children, where there was much reason to think that both parents were infected, I have met with other two cases very similar to that which I have mentioned, in which a mercurial course given to the father proved so completely successful that all the children of both fa-

milies that have been born since that time have been entirely healthy, although one of them had previously lost two and the other one from their not having entertained any suspicion of the nature of the disease.

These, as well as various other facts which I might adduce, render it obvious to me that Lues Venerea may be, and frequently is, communicated in the manner I have mentioned; that is, by the infection passing directly from parents to children, and where no marks of disease appear either upon father or mother. Nor would I have judged it necessary to have entered so fully into the subject, as by many the opinion I am endeavouring to establish will be admitted, had it not been with a view to put the younger part of the profession upon their guard, till by experience they are enabled to judge for themselves of the distressful consequences that would frequently result from the opposite doctrine being admitted.

Among other baneful effects of syphilis, perhaps none prove more distressful than the frequent abortions which it evidently occasions. A child infected in the uterus will in some instances not come away till the full time; but in a great proportion of cases abortion takes place in the sixth or seventh month, sometimes sooner, but most frequently about the middle of the seventh month. Of this I have met with such a number of instances, that I am induced to consider it as one of the most frequent causes of abortion; but as the child is commonly either born dead, or so weakly that it soon dies, sufficient evidence is not often obtained to lead the attendants to entertain any suspicion. Hence practitioners seldom hear of it unless the disease has made greater progress than usual. We have it in our power, however, when this cause of abortion is discovered, to remove it with much certainty. A well-conducted course of mercury very seldom fails to prove effectual. I have now met with a considerable number of instances where abortion had regularly taken place in the sixth, seventh, or eighth month, and in which, from there being no mark of disease either upon the father or mother, the real cause of it remained concealed; but which being at last discovered, either by some of the children being clearly marked with the disease, or from its breaking out in an obvious form on

one or both of the parents, a mercurial course has at last been prescribed, and in no instance has it failed where a sufficient quantity of the medicine has been given. In two instances it did not answer so completely as in the others, but in both there was sufficient evidence of too little mercury having been employed; for the children in both instances were kept till the beginning of the ninth month, which in the one was two months, and in the other six weeks later than had been the case before, and both the parents having in each of these instances been made to take mercury again, and in greater quantities than before, no abortion has since taken place, and each family has within these few years had several healthy children.

At whatever period children with this infection are born they are remarkably weak and delicate. The muscles over the whole body are flaccid, and the joints have not that firmness which they ought to possess. When the disease is discovered immediately upon the birth of the child, it is usually in the form of an erysipelatous efflorescence over the whole body. In some instances the cuticle is either altogether or in part destroyed, and the skin is tender, and affords a kind of matter. In others the nails have not formed either on the fingers or toes.

Sometimes again no mark of disease will be perceived till the tenth, twelfth, or even fourteenth day after delivery; and in such cases the eruption occurs chiefly about the anus, on the nates, and about the pudendum. In these places irregular blotches arise, of a light strawberry colour, and somewhat elevated above the contiguous surface. Although a thin acrid serum in some instances oozes from them, if not prevented by a timely exhibition of mercury, the disease is apt to spread quickly over the whole body; but excepting in the parts which I have mentioned, it usually appears in the form of a crusty eruption, which in some cases is dry, and falls off in small scales, while in others it is kept together by the exudation of a viscid matter, particularly upon the forehead, eye-lids, arms, and breast.

I have already had occasion to observe, that in supporting a favourite theory some have denied that the foetus in utero ever receives this disease from the parents, and as-

sert, that wherever it occurs in new-born children they must have received it from the mother in the time of delivery. But while the fallacy of this opinion is rendered obvious, as we have just had occasion to observe from the foetus being in many instances perceived directly after birth to be covered with a venereal efflorescence, we also find that the syphilitic virus is in this state of a more dilerious nature than it ever appears to be in any other form of the disease. Besides, being more particularly apt to communicate the infection, it proceeds with more rapidity to destroy the constitution, insomuch, that if mercury be not employed immediately on the disease being perceived, it usually makes such quick progress that a fatal termination can scarcely be afterwards prevented.

In all such circumstances the child ought to be nursed by the mother ; and as mercury is necessary for both, they should both be put immediately under it. As it has been found that a diseased child may be cured by sucking the milk of a woman under mercury, some have advised that new-born children should always be treated in this manner. But I can say from experience, that it is not to be trusted. In some instances this practice will no doubt succeed. In all it will perhaps accomplish a temporary removal of the symptoms, but for the most part they return again, or the disease breaks out in some other form. At the same time, therefore, that the mother begins to take mercury, it ought to be given to the child, and it may be done with no inconveniency ; for even at this early period it excites less distress than it usually does afterwards. The cause of this may be difficult to assign ; but I have in various instances found that mercury in early infancy, is not so apt to excite either salivation or violent effects upon the stomach and bowels as it afterwards does, and that it may be given with safety in sufficient quantities for curing the disease. Calomel is often employed for this purpose. The dose should be the fourth or fifth part of a grain three times a-day, and when rubbed with a small quantity of sugar, the child takes it easily. Mercurius alkalifatus is a preparation that answers particularly well in the dose of half a grain three times a-day ; and I sometimes employ the common blue pill prepared with triturated quick-silver. A pill contain-

ing a grain of mercury, being rubbed into a powder, and divided into four, one of these is given evening and morning. Any of these being continued for the space of a month, will, in most instances, remove every appearance of the disease; but a complete cure will not be accomplished if the use of the medicine is not persisted in for a considerable time thereafter. When the child is healthy, and not of a delicate form, this should be done with no interruption, otherwise it may be laid aside occasionally for eight or ten days together; but upon the whole, it should be given for the space of fifteen or sixteen weeks, and never discontinued so long at once as to allow the effects of the mercury upon the system to be entirely gone at any one time.

When a child in this situation cannot be suckled by its mother, either from her want of milk or any other cause, what are we to do? Another nurse is commonly procured; but this resource ought never to be adopted, for it seldom fails of giving the disease in the most virulent form to whoever is so unfortunate as to be employed for this purpose. All such children ought to be nourished and brought up on spoon meat, nor should the restriction be confined to the first weeks of infancy only. No child infected in this manner should be put to the breast of a sound nurse till a course of mercury has been continued for three months at least after every external mark of the disease is gone. In one instance, where a child in this situation had for seven weeks been nursed by the mother, and where mercury had been regularly continued for the space of three weeks after every external mark of the disease had disappeared two different nurses were infected, who were employed to suckle the child during a temporary fever with which the mother was attacked. And in another the disease was given in the same manner where the child was three months old, and where every symptom of syphilis had disappeared upwards of eight weeks. Hence I conclude that the greatest attention is required for preventing similar occurrences, and that nothing will prove effectual but a regular and long-continued use of mercury.

In addition to what I have already said on the subject of syphilis producing abortion, I may observe, that when a woman has suffered one or more abortions, and has reason

to think that they proceed from venereal infection, she, as well as her husband, should immediately be put under mercury. It is a prevailing opinion that mercury is apt to occasion abortion, and it is therefore seldom given during pregnancy. Much experience, however, has convinced me that this opinion is not well founded, and, when managed with caution, that it may be given in sufficient quantities at every period of pregnancy, for curing every symptom of syphilis, and without doing the least injury either to the mother or child. We would not indeed from choice give mercury during pregnancy; but when a woman in this state is evidently poxed, or when there is good reason to think that she is so, I would not hesitate to advise a course of mercury. In different instances I have done so, and always with much advantage. Where obvious symptoms of Lues Venerea break out during pregnancy scarcely any will doubt of the necessity of giving mercury, but some explanation may be required for advising it to be given where there is only ground of suspicion.

In illustration of the propriety of this, the following, among several cases, may be recited. Five years ago I visited a lady in the fourth month of pregnancy, on account of a simple fracture of the os humeri. The patient being young and healthy I prognosticated a speedy cure. She had been married four years, and had suffered two abortions, one in the sixth, the other in the seventh month, and her friends were anxious lest this accident should produce the loss of another child. This induced me to enquire into the circumstances attending the previous abortions, when I found that both children were born dead, and entirely destitute of nails and cuticle. No obvious symptom of syphilis had appeared upon the parents, but the husband had occasionally been attacked with a dry scaly eruption upon the breast and shoulders. I also discovered that he laboured under the venereal disease a few months before marriage; and it did not appear to me that he had taken mercury either with the regularity or to the extent necessary for removing the symptoms which took place. This led me at once to say that both he and his wife should immediately undergo a complete course of mercury. To this they submitted, and in less than a year from the com-

mencement of the course the latter was delivered of a healthy child. Now here was only ground for suspicion; but the event gave cause to imagine that if this kind of proof was to be set aside where direct evidence cannot be procured, and which often happens in cases of this kind, many constitutions would be irreparably injured, and many children lost which otherwise might be saved.

During pregnancy mercury ought in every instance to be used in the form of unction, as we thereby with most certainty prevent it from acting upon the stomach and bowels, and thus avoid the hazard of abortion taking place as the effect of irritation upon these parts.

Nothing indeed more readily excites abortion than purgatives, when severe in their operation upon the bowels, or when they even only produce any considerable degree of tenesmus; and as the internal exhibition of mercury is frequently the cause of this, it cannot but with much hazard be given in any considerable quantity during pregnancy.

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## S E C T. VII.

*Of some Peculiarities of Form under which Lues Venerea has appeared in Scotland and Canada.*

I HAVE already had occasion to remark that this disease has appeared with some peculiarities both in Scotland and in Canada. By the accounts received of it from Canada it seems to have appeared in that country in the same manner, and under the same form as it had a considerable time before done in Scotland; and as few have had more opportunities of seeing it here than I have had, I mean to give a short description of the appearances which it exhibits, and to mention the method of cure which hitherto has been found most effectual.

In the Highlands of Scotland this disease is usually termed *sivvens* or *sibbens*: In Dumfries shire and Galloway it is commonly called the *yaws*, from a resemblance which it

is supposed to bear to the African and West Indian disease of that name ; but over the whole kingdom it is known to be the venereal disease. That this is so is certain from those afflicted with it in every district where it has yet appeared having been able to trace it to such an origin as left no room for doubt, as well as from the symptoms which take place in it bearing an exact resemblance to those of the later stages of Lues Venerea in the ordinary form of the disease, and from mercury being the only remedy upon which we can place any dependence for a radical cure.

It never appears, as I have elsewhere had occasion to observe, in the form of Gonorrhœa, nor seldom at first in any form upon the genitals, owing to the manner in which it is most frequently communicated. The infection being for the most part received by eating or drinking out of the same utensils with those labouring under the disease, it often appears at first in the throat or some part of the mouth. In the mouth the sores have the usual appearances of venereal ulcers. This is likewise the case in the throat when the disease has been of some duration ; but at first, and often for the space of several weeks, although the patient complains of a good deal of uneasiness in swallowing, and of a constant hoarseness, there is nothing perceived upon inspection but a degree of tenderness accompanied with an erysipelatous redness of the amygdalæ, uvula, and velum pendulum palati. If not prevented, however, by the use of mercury, ulcers at last form upon these parts, and commonly spread more quickly than venereal ulcers usually do in other parts of the body ; insomuch that the uvula and amygdalæ will sometimes be entirely destroyed in the course of a few days, and a degree of hoarseness and loss of voice produced, from which the patient never afterwards recovers.

It is particularly apt to affect the internal parts of the nose ; and when the sores penetrate to the ossa spongiosa these soon become carious, and come away in small pieces along with the matter, which is always exceedingly foetid. When not prevented by mercury the ulcers spread to the hard bones of the nose, and from these to the bones of the cheeks. In this manner the whole face becomes ulcerated, for when these bones are affected the contiguous soft

parts likewise become soon diseased. It is not uncommon for these ulcers to attack the eye-lids.

When the infection is not received by the mouth the disease appears in a variety of forms in different parts of the surface of the body. When the virus has entered the system the parts upon which it first commonly breaks out are the genitals, the parts contiguous to the anus, the anterior parts of the thighs and legs, the under part of the abdomen, the breast, arms, fingers, and toes, and hairy scalp. It does not so readily fix upon the fleshy parts of the legs or thighs, or on the back. In some the parts become covered with an infinite number of small pustules, and, as they are itchy, the disease is at first often mistaken for itch. This happens the more readily from its prevailing almost entirely among the common people, who, from want of cleanliness, frequently labour under itch; and so much is sibbens confined to this set of people, that excepting children, who are more particularly exposed to receive infection from servants, those in the higher ranks of life are scarcely ever attacked with it, at least few instances of their being so have fallen within my observation.

This eruption, however, soon assumes appearances which sufficiently distinguish it from itch. The skin upon which it is seated becomes thickened and somewhat elevated, and acquires the characteristic mark of venereal blotches, a peculiar copper-colour appearance.

The late Doctor Gilchrist of Dumfries, in a paper upon this subject, in the *Physical and Literary Essays of Edinburgh*, remarks, "that these scabby eruptions are often met with on the scalp, forehead, inside of the thighs, groins, and parts contiguous. Inflammation and excrescences about the fundament are frequent; and it sometimes appears in the form of a herpes exedens, healing in one part and breaking out in another."

Some have small tubercles, or hard elevated knots upon the face, arms, and breast, somewhat resembling small pox at the height, but of a red or copper-colour, and accompanied with a painful degree of heat. If

mercury is given early these tumours gradually subside, otherwise they become large and discharge a fætid viscid matter, which forms into crusts or flakes, and on their falling off, the parts beneath are red, tender, and in some cases in a state of ulceration.

Instead of this more numerous eruption some are attacked with small inflammatory boils, which do not readily suppurate, but remain for a considerable time hard and of a copper-colour, and at last discharge a thin bloody ichor. These at first resemble the common anthrax or carbuncle, but soon after bursting they assume all the appearances of the true venereal ulcer.

But the most characteristic symptom of this variety of syphilis is a soft spongy excrescence, in size and colour resembling a common rasp, which is apt to appear on all such parts as either become ulcerated, or that are attacked with any kind of eruption; *livven* or *libben* being in many parts of the Highlands the name of a wild rasp, and this being a very frequent symptom of the disease, is the cause of its being distinguished by this appellation. In some instances this spongy substance rises to a considerable height, nor can it be kept down by any of the common escharotics; for although entirely removed, if the virus of the disease be not eradicated by the use of a full course of mercury, it soon returns to a greater extent than before; but as mercury is commonly given as soon as this symptom becomes evidently marked, the excrescence is seldom so much elevated as it otherwise would be.

These fungous productions are occasionally met with in every part of the body; but they are particularly apt to form on such parts as have become tender whether from previous eruption or from the cuticle having separated and come off from the skin beneath; a circumstance which sometimes takes place in this disease, and when to any considerable extent, always with much inconvenience and distress.

In the treatise which I have mentioned Doctor Gilchrist observes that this disease does not attack the large and solid bones, and very rarely any of the others.

I have however seen several instances of the contrary, in which both the bones of the legs and arms have been affected; and it is by no means uncommon to find this disease fix upon the bones of the head. I have seen it indeed in every part of the body, and in every form under which Lues Venerea usually appears, except in chancres upon the genitals. I have seen it produce sores resembling chancres upon the lips and on the nipples of nurses; and where an infection has been of long duration I have known ulcers form upon the penis, but I have not known an instance of its producing chancres either in men or women from coition, owing, I imagine, to all who are attacked with ulcers upon these parts from this cause avoiding venereal intercourses, which they very universally do till a cure is obtained by a course of mercury; but although fibbens is not usually met with in the form of chancres upon the penis, this, as well as other parts of the genitals, are particularly apt to be attacked with such ulcers as appear from the virus having entered the constitution. In different instances I have known the whole penis and scrotum destroyed with it, but this has commonly happened from the patient having neglected too long to call for medical assistance, or from mercury being given in too small quantities.

These ulcers, like the usual form of venereal ulcers proceeding from the constitutional form of the disease, do not commonly produce buboes. This, however, is not universal; for buboes sometimes take place in fibbens, not only from the primary ulcers of the disease, as I have in more than one instance perceived in the arm-pit from sores produced upon the nipple in nursing an infected child, but also from those which appear upon the penis and other parts of the genitals from the virus having entered the system, and the appearance of buboes produced by fibbens, whether in their swelled or ulcerated states, is in every respect the same with that of the ordinary form of venereal bubo.

Syphilis, in whatever way the infection is communicated, is readily transmitted, as we have already had occasion to see, from parents to the fœtus in utero, and

this is particularly apt to happen in fibbens. Sibbens therefore proves a frequent cause of abortions, although in some instances children are born with it at the full time, and in a few it breaks out in the course of the first month after delivery.

In the treatment of fibbens, as of every variety of Lues Venerea, mercury is the only remedy upon which we can place dependence. Sarsaparilla, guaiacum, and mezereon have occasionally proved useful, but we trust to mercury alone for a radical cure. The observations we have already had occasion to offer on the employment of mercury apply with equal propriety to the treatment of every symptom of fibbens. It is therefore unnecessary to consider the subject farther at present; but while we refer for this purpose to different parts of the preceding sections, I think it right to observe, that a greater quantity of mercury is in most instances required for the cure of fibbens than we usually find to be necessary in the ordinary form of the disease. Relief is obtained with perhaps equal ease, and a stop may be put to the farther progress of the disease by the same quantity that we employ for the common symptoms of pox, but it is more apt to return if the medicine be not given in larger quantities, and continued for a considerable time after every appearance of infection is removed. When the disease has been of long duration mercury ought to be continued for seven or eight weeks after every symptom has disappeared.

A practitioner of experience and observation, and who had many opportunities of seeing every symptom of fibbens, informed me that mercurius sublimatus corrosivus frequently proves successful in the cure of the more inveterate symptoms of the disease when the milder preparations of mercury fail. He gave it in the form of drops. Sixteen grains were dissolved in an ounce of water with the addition of eight grains of crude sal ammoniac, and of this ten drops were given three or four times a-day.

When ulcers in the throat and other parts do not readily yield to the use of mercury, we have recourse

to caustic and escharrotics, and they prove equally useful here as in every variety of sore proceeding from Lues Venerea. In various instances they have been rendered clean and brought into a healing condition by fumigating with cinnabar, when they had previously resisted every other remedy.

The public, however, are equally interested in the prevention of this disease as in the cure of it, particularly in those districts where it has long prevailed, and with proper attention there is much reason to suppose that it might soon be eradicated. In some parts of Scotland this has already indeed been accomplished, and the means by which it has been done are simple, and easily practised. They consist entirely in a due attention to cleanliness and in preventing nurses and other servants from being employed where there is the least reason to imagine that they are infected. In the choice of a nurse this is a point of the utmost importance; for in sibbens, as in every other form of syphilis, I have had many proofs of the disease being communicated by the milk alone, and as this is almost the only way by which it has found access to families of rank, they are particularly interested in preventing it.

The chief difficulty which occurs to the prevention of this disease proceeds from those who ought more anxiously to wish for it. The infected are so much afraid of a discovery being made to injure their reputation that they do all in their power to conceal it, by which they are often prevented from taking mercury in that complete manner by which alone a cure can be accomplished. I know, however, that this anxiety for concealment may be removed, and, with proper attention, that those poor people who otherwise would fall victims to the baneful effects of the disease may be easily induced to apply for medical assistance. The clergy have this so much in their power, that through their interference the sibbens might soon be eradicated. In one parish this was actually done. The disease had spread to such an alarming height that more than three-fourths of the inhabit-

ants were infected, and many of the more delicate, particularly young children and females, died under it. This had gone on for many years, when by the exertions of the clergyman of the parish it was entirely removed in the course of a short time. He went personally to every individual of his parish and convinced them of the propriety of applying for medical assistance immediately on the disease breaking out, which they agreed to the more readily from their being sensible that all of them had got the disease in the most innocent manner. In this way it was soon carried off, and by due attention to cleanliness, and avoiding all kind of intercourse with those who they suspected to labour under it, the disease has now for a considerable time been entirely subdued. This has in some degree indeed been the case in every district of Scotland where scabbs ever prevailed. In some situations it has been nearly eradicated, and in none is it now so frequent as it was some years ago. There is much cause therefore to hope that by the superior attention to cleanliness, which of late years has prevailed among our common people, it will soon become every where unknown.

If the disease as it prevails in Canada is the same with the scabbs of Scotland, and from all that I have heard of it there is no cause to doubt of its being so, the same method of cure will prove effectual, and the same means of prevention must be observed.

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## S E C T. VIII.

### *Of Prophylactics in Lues Venerea.*

TO prevent infection is an object of the first importance in all diseases, but there is none in which our endeavours have proved less successful than in this. As the pleasures and safety of mankind are both interested,

Prophylactics in Lues Venerea have long been an object of attention ; but hitherto, notwithstanding all the boasted specifics with which every kingdom of Europe abounds, nothing has been discovered upon which any dependance can be placed.

At first view one would not doubt of ablution alone proving sufficient for preventing infection. As the parts to which the matter of infection is applied are altogether external, and as a considerable length of time commonly elapses before any effects are produced by it, we might with confidence expect that bathing the parts in warm water, or any other liquid, could scarcely fail of removing the contagious matter. This, however, is not the case ; for although some advantage may occasionally be derived from careful ablution we have daily proofs of its failure, even when practised with all manner of attention.

This must probably arise from the virus being either exceedingly subtil, or so very adhesive that it cannot be separated from parts to which it has found access by any means that have as yet been employed. In this view, therefore, two objects present themselves. Any application to be made use of should not only be of a very penetrating nature, but capable of destroying that connection by which the virus is thus made to adhere to the parts to which it is applied. I also think it probable that some advantage may be derived from combining mercury with whatever is best adapted to these purposes. By acting as an antidote it may serve to destroy such parts of the venereal poison as the others have not been able to remove.

Crude mercury, triturated with honey and with turpentine, and mixed with a sufficient quantity of water, has been used as a wash for this purpose ; but the most convenient way of employing mercury here is in the form of a watery solution of corrosive sublimate. It may be used of various degrees of strength, from the quantity of one grain to three grains of mercury in the ounce of water. More than this proves irritating and corrosive.

As it is probable that the virus proves more adhesive than it otherwise would be by combining with the mu-

cus of the parts to which it is applied, all such articles as prove solvents of mucus, or that in a more particular manner destroy its tenacity, may with propriety be employed in the composition of an antisyphilitic wash. Upon this principle lime-water may be used with advantage; also the caustic fixed alkali, and even the caustic volatile alkali so diluted with water as to admit of their being applied with safety.

No harm can ensue from the external use of any of these articles in the form of a wash, and more advantage, I have reason to think, may be derived from them than is commonly obtained from the use of those secret specifics which the interest of individuals and credulity of our young people have occasionally brought into notice. I think it right, however, again to remark, that none of them can with certainty be relied upon, and that in no instance ought any of them to be injected into the urethra, as preventatives of Gonorrhœa. When the disease has actually taken place, they may, when much diluted, be used with freedom; but they cannot be employed but with much risk of inducing inflammation when of such a strength as can have any influence in dislodging the virus, by dissolving or destroying the mucus with which it is combined. Whether these specifics to which I allude have any of the articles which I have mentioned for their basis or not I cannot determine, but when used as injections they often do much harm by exciting pain, and such a constant inclination to pass urine as proves exceedingly distressful.

## S E C T. IX.

### *Of Lues Venerea as inducing other Diseases.*

AS the virus of syphilis is often difficult to eradicate, and the disease being frequently known to break out again long after a cure has been supposed to have been

accomplished, the fears of patients have induced them to suspect that it cannot with any certainty be removed after having appeared as a general disease of the system, and even to consider it as the cause of many other diseases.

Even practitioners have been divided in their opinions upon this. The result of my observation has already been given on the power of mercury in curing the disease. In section fourth of this chapter I have endeavoured to show that where failures have happened they must in a great measure have arisen either from the misconduct of patients when under mercury or from too small a quantity of the remedy being given. But while I am clearly of this opinion I at the same time think that Lues Venerea is often the cause of other diseases, which frequently prove fatal from want of a proper application of mercury, by which a cure of all of them might be easily obtained.

In the preceding parts of this work a description is given of all the ordinary symptoms of Lues Venerea, and of the method of treatment appropriated to each; but if the opinion which I am now endeavouring to support is well founded, this disease, it is evident, must occasionally appear under other forms.

We have already had occasion to observe that Lues Venerea, when not interrupted in its course by the use of mercury, usually makes a certain progress, and that the symptoms make their appearance with some regularity: But when mercury is employed, and not given in quantities sufficient for eradicating the virus, although all the symptoms may thereby be suspended, the disease will certainly appear either in the same or some other form at some future period. In this case the disease generally shows itself by one or other of the symptoms that have been described, but occasionally we meet with it under a variety of other appearances; the virus, instead of producing the ordinary symptoms of Lues Venerea, tending rather to induce other diseases.

This I know is denied by many, who allege that syphilis is never productive of other diseases; but I have met with it in such a number of instances, and these so evidently marked, that I consider the fact as certain. The

virus of syphilis will not produce any disease that depends upon a specific contagion, such as small-pox, measles, itch, and some others, but I have much reason to think that a great variety of other diseases are induced by it. It may be asked in what manner can syphilis act in producing other diseases, and what evidence can be given of its ever having done so? In answer to this I may observe, that it is often difficult, and sometimes impossible, to explain the action of causes in producing diseases. We may easily, however, suppose, where the virus of syphilis exists in the system, but not in sufficient force to shew itself by the usual and more obvious symptoms of the disease, that it may, however in various instances be capable of exciting a great deal of derangement, and even many diseases which otherwise might not take place, and that it will more especially be apt to produce those diseases to which the constitution is predisposed, or those to which the patient is rendered liable by exposure to particular occasional causes. If the virus can exist in the system for a considerable length of time without shewing any external mark of disease, and of this few I believe will doubt, it is difficult to conceive that it should not produce both general derangement and particular organic affections; and accordingly I believe that it more frequently does so than we are usually led to imagine. The evidence which I could give of this would be exceedingly ample, as I could relate a very extensive collection of cases in a great variety of diseases in which it actually happened; but the extent of this publication renders it necessary to confine the proofs of it within narrower limits. The diseases induced by the venereal virus, of which I shall give instances, are pthisis, asthma, rheumatism, dropfy, head-ach, epilepsy, and mania.

In the month of October 1783 I was desired to visit a gentleman at some distance from town, with an extensive foul ulcer upon his left shoulder. This was mentioned as the most material part of his distress; but I also found that he had for several months laboured under all the most alarming symptoms of pthisis, such as severe cough, spitting of purulent matter, pains in the breast and sides, night sweats, quick pulse, and an emaciated state of the

body. These symptoms, however, did not excite the attention of the patient nor of his friends so much as the ulcer upon his shoulder, which, from the great quantity of matter which it discharged, and the great length of time which it had endured, was considered as the cause of his weakness as well as of all the other symptoms.

The appearance of the sore giving cause to think that it might be venereal, I mentioned this to the surgeon in attendance, as well as to my patient, with a view to discover whether from the history of the case, and from his previous course of life there was any ground for suspicion. The answer which I received to this inquiry was, that soon after the first appearance of this ulcer, about three years before the time of my being consulted, an ulcer had appeared in his throat, accompanied with some other symptoms of syphilis. For the removal of these he had been put under a long course of mercury, which had proved successful; and as he had not since that period run any risk of being infected he did not suppose it possible that the ulcer upon his shoulder, or any of his other symptoms could be venereal. Having found, however, that the mercury, although long continued, had never been given in greater quantities than to render the mouth moderately sore, and that for a considerable time an eruption resembling venereal blotches had prevailed over his breast and arms, I did not hesitate to say that the infection had not been eradicated, and that he ought immediately to enter upon a full course of mercury.

The chief objection to this was the debilitated state of our patient, and the quickness of pulse, with other symptoms of fever, which prevailed in a very considerable degree, the pulse at this time beating upwards of 130 in a minute. Even these considerations, however, did not deter me from advising the use of mercury; having even at that time seen more than one case of a similar nature, where the lungs were evidently affected, and in which a cure was obtained by mercury; and judging from the whole history of the case that the pthysical symptoms might be kept up by the syphilitic virus, I observed to my patient, that if my conjecture was well founded, these symptoms, as

well as the others, would gradually abate on the mercury taking effect. I also said to his friends, that in such circumstances the mercury could not add much to his hazard, however severely it might operate; the nature and severity of his symptoms being such as gave no cause to imagine that he could live above a few weeks if some unexpected alteration did not take place.

The patient himself having readily acquiesced a course of mercury was immediately prescribed. At first he rubbed in a drachm of strong mercurial ointment every evening. This came to be repeated morning and evening; and as his cough and fever were not increased by it, and the state of his mouth enabling him to bear it, the quantity at each application was increased at the end of eight days to a drachm and a half. The ulcer was dressed with common wax ointment. About the end of a fortnight it became clean, which it had never before been, and any uneasiness with which it had previously been accompanied was now removed. The blotches upon his skin had begun to yield, and even the febrile symptoms, instead of being increased by the mercury, were somewhat abated. His mouth became exceedingly sore; but although a good deal of salivation was excited the same quantity of mercury was continued. This I was induced to insist upon from our having now very satisfactory evidence of all his symptoms being venereal, for even the cough and purulent expectoration became inoderate in proportion to the quantity of mercury that was exhibited. By the end of the sixth week the cough was nearly gone; the blotches were almost entirely removed; the ulcer continued perfectly clean and much contracted, and his pulse did not now beat above ninety strokes in a minute.

In the course of a fortnight from this time, that is, after he had taken mercury for the space of eight weeks, scarcely any remains of the blotches could be perceived: The sore was reduced to the fourth part of its original extent; but about this period it became nearly stationary, for which it was touched every second or third day with lunar caustic. At the end of another fortnight it was completely cicatrised; but the infection having been of long duration, I judged it proper to continue the mercury three weeks lon-

ger, being thirteen weeks in all. He had now been many weeks entirely free of cough. His pulse was about its natural standard; and as he had been allowed nourishing diet during the whole course, he was even considerably improved in appearance and strength. By the beginning of the ensuing summer he was equally strong as he had ever been at any period, and when I last saw him, about three years ago, he had continued entirely free both of Lues Venerea and pthifis.

In the beginning of January 1784 I was desired to visit a patient newly come to town, with sores on different parts of his body and limbs, and he had also for a considerable time been distressed with asthma. It was chiefly however for the sores that he applied for advice, as he had been led to consider asthma as a disease for which there was no remedy. There was one large ulcer immediately above the great trochanter of the right thigh; one upon the middle and most prominent part of each leg, both of which penetrated to the tibia; one upon the breast, where the sternum appeared to be thickened, although not carious; one upon the right side, upon the seventh and eighth ribs; and a small sinous ulcer upon the middle and outside of the right arm, which, upon probing, was found to run to the surface of the ulna, which was rough for the space of an inch. Besides these there were several small ulcers upon the toes of both feet. These, as well as the others, were all foul, and discharged a thin, foetid matter; and being accompanied with that erysipelatous kind of redness which frequently furrounds the margins of venereal ulcers, I was thereby led to suspect them to be of a venereal nature. The patient mentioned, as reasons for thinking that I was mistaken, that these ulcers were now of seven years continuance, and on the suspicion of their being venereal that he had taken mercury to a considerable extent at three different times, each course having been continued for nine or ten weeks; and although he had from all the three derived benefit, that none of the sores had healed by the effects of any of them, and that some of them had even become worse soon after the last course of mercury was left off. The asthmatic symptoms were now of five years duration. They began without any obvious cause, and had gradually become

more violent, nor had any remedy that had been employed for them given him relief, excepting opium, and even this was merely temporary. Besides a constant difficult breathing, he was liable to periodical attacks of a more severe nature, which occasionally came to such a height as to endanger suffocation. These occurred most frequently during sleep, and, for the most part, with much regularity, about three o'clock in the morning.

The patient, who was now about forty-five years of age, acknowledged that in his earlier years he had suffered much from Lues Venerea, but having been led to suppose that he had already taken more mercury than was necessary, it was with difficulty that I persuaded him to enter upon a farther course of it. The more, however, that I heard of the rise and progress of his complaints the more I was convinced of their being venereal; for besides the appearances of the sores which I have mentioned, I found upon enquiry that he had never taken a full course of mercury, for although it had always rendered his gums sore, he had never used it in such quantities as to require confinement. Neither had any of the attempts which had been made to cure the sores by external applications proved successful. A great variety had been employed, but although some of these had rendered them more clean than they had been before, and procured a discharge of better matter, no permanent advantage had been derived from any of them.

These considerations determined me to give a decisive opinion on the propriety of his taking mercury in larger quantities than he had ever as yet done. This induced him to agree to it, and he entered upon the course on the 14th of January. At first he rubbed in a drachm of mercurial ointment every night, and took one of the blue pills evening and morning. In the course of eight days he used two drachms of the ointment daily, and the same number of pills were continued till his mouth became exceedingly sore, and a good deal of salivation induced which happened at the end of a fortnight. At this period the pills were left off, and only a drachm of the ointment employed daily. The common wax ointment was applied to the sores, and renewed morning and evening.

Till he entered upon this course the sores had at all times given him much uneasiness. They had never produced acute pain, but they were accompanied with an uneasy, itchy sensation, which frequently deprived him entirely of rest. Before the end of the third week this was completely removed; the sores were become clean, and the discharge of a better consistence; at the same time that his asthmatic symptoms were by no means so severe. As by this he was convinced of the propriety of the course of mercury, he readily submitted to the distress and inconveniency which it produced, and kept his mouth fully affected during the whole time of it. By the beginning of March, that is, after having taken mercury for nearly seven weeks, all the sores were entirely healed excepting that upon the outside of the thigh and those upon the legs. Even these were much diminished, and the cure in all the three seemed to be retarded only by the state of the bones beneath, which were found to be denuded of the periosteum, and even in some parts rough. These, as well as the others, had been dressed with mild wax ointment from the first, and excepting the laying open the sinus upon the fore arm, no farther attention had been given to any of them. He now breathed easily and had not experienced any severe fit of asthma from the time that his mouth became first fully affected with the mercury.

The course was carried on in the same degree to the end of the thirteenth week, when judging from the quantity of mercury employed, and the regular manner in which it had been taken, that the virus by which his disease seemed to have been produced must be eradicated, I caused him to leave it off. The asthma was entirely gone, and all the sores continued firm and well, excepting the three I have mentioned. I now supposed, however, that these were kept up entirely by the carious bones on which they were seated; and as a cure could not be looked for till the diseased parts exfoliated, and as this might probably be tedious, I advised him, as soon as he could with safety venture upon a journey, to go home, and to do nothing with a view to the sores but dressing regularly with red precipitate ointment in order to prevent the growth of a fungus, with which all the three were covered. This, with the occasi-

onal use of calcined allum, prevented the fungus from being considerable; but it was not till a year had elapsed that any of the sores healed. About this period an extensive exfoliation appeared to be coming away from the tibia of the right leg. He now came to town, and by cutting into it I got it easily out, and the sore healed in a fortnight. The sore on the other leg healed in a similar manner at the end of three or four months after a small spiculated portion of the tibia had come away, but the ulcer upon the trochanter has not healed. Several small pieces of bone have from time to time come away, but I conclude that more must be thrown out before a firm cicatrix will form; for although now reduced to the appearance of a narrow sinus, which frequently heals, it always bursts out again. It is not, however, productive of much inconvenience; and on account of the situation of the bone, I think it better to trust to time alone than by means of any operation to attempt to promote the exfoliation of the diseased parts. No return of asthma has taken place, and he is now in good health.

In the month of May 1789 I was desired to visit a patient, by trade a brewer, aged forty, and very corpulent. For several years he has been liable to periodical returns of asthma, and during all that period his breathing had been difficult, insomuch that he had for the most part been obliged to sleep nearly in an erect posture. He had been liable to frequent and very distressful palpitation of the heart, and his pulse was at all times frequent and irregular. Other practitioners had previously been called, and, as is usual in such cases, different opinions were formed of the cause of the disease. By some it was considered as gout; others judged it to proceed from hydrops pectoris, while by some it was supposed to constitute what of late has been termed angina pectoris. The patient himself, however, was of opinion, that all his symptoms originated from what he termed an ill-cured pox. He informed me that in his earlier years he had suffered much from frequent attacks of syphilis, and not having taken mercury in a regular manner; particularly from the last attack, and to which this affection of his

breathing had succeeded: From this he was convinced that the virus had not been eradicated.

No evident symptoms of Lues Venerea, however, could be discovered; so that I could not venture to advise a course of mercury as my patient wished me to do. Purgatives, diuretics, and blisters, were repeatedly employed, but with no advantage; and some relief being derived from opiates, he was at last induced to trust entirely to a large dose of laudanum taken at bed-time, and a lesser dose in the morning. In this situation I left him in the month of September, nor had I again occasion to see him till the month of April 1790, when I was called on consultation with the surgeon of the family for an ulcer which two months before had appeared upon the right side of the nose. At first this ulceration was so inconsiderable as scarcely to excite his attention; but, as it soon began to spread, various applications were employed, from the mildest to the strongest escharrotics; but although these, with the occasional use of lunar caustic, had proved useful, by preventing the growth of fungus which had previously prevailed, still the sore continued to extend, and at this time had spread to the opposite side of the nose. Upon inquiry I found that in the month of November, some days after exposure to infection, a chancre had appeared upon the glans penis; but as it healed by being twice touched with caustic, and which he had done without the knowledge of his surgeon, he had not thought it necessary to enter upon the use of mercury.

At this time the difficulty of breathing and distressful palpitation of the heart were more severe than they had ever been at any period; but the account which I had received of this recent infection, the progress which the ulcer was daily making, and the inefficacy which had already been experienced of local applications, determined me to advise an immediate and full course of mercury. Being informed that mercury did not readily affect him, both the internal and external use of it was advised; so that in the course of ten days his mouth was rendered as sore as he could possibly bear it, and he salivated to the

quantity of between two and three English pints a day. The fore was dressed with common wax ointment.

In the course of three weeks from his entering upon the use of mercury the fore was considerably diminished, and at the end of six weeks it was entirely healed; but to the surprise and satisfaction of all concerned all his other symptoms became better on the mercury taking effect. The difficulty of breathing was soon much relieved, the palpitation vanished entirely, and the pulse fell to its natural standard. It was several weeks before the asthmatic affection left him entirely, but this happened before the end of the course, which was continued to the end of the third month; and he has not since that period experienced any return of his disorder.

In this last case it may be a question whether the patient laboured under syphilis at the time when I first saw him or not: He himself imagined that he did; and on finding afterwards that the disease in his breast was completely removed by mercury, when rendered necessary by the presence of a more obvious symptom of the disease, I came also to be of the same opinion, and this induced me to give the mercury in large quantity, and to continue it longer than would have been necessary for the cure of a more recent infection.

In March 1787 I was consulted by a gentleman of fortune in the south of England. His case was described to be a severe rheumatic affection, with which he had been afflicted for the space of eighteen months. After much exposure to cold and wet weather in the course of hunting, he was attacked with severe pains in all his joints, particularly in the shoulders, wrists, knees, and ancles. These continued in some degree from the first approach of the disease, but he had occasionally been distressed with severe pains in his back, loins, and hip-joints, to such a degree as not to be able to move for two or three weeks together but with an unsupportable increase of pain. His fingers and toes also became swelled and painful; and as the balls of the great toes had been particularly affected his disorder by some had been considered as gout. At the time of my being consulted the joints of his fingers were so much swelled that he could not even sign his name, but

the chief cause of his distress at that time was a swelling of his right knee. The swelling and pain in his other joints had at different periods prevailed in various degrees; they even at times left him entirely; but the right knee had continued swelled and painful from the first, and at this period it was represented as being nearly double the size of the other. There was accordingly much tension, and a very extensive fluctuation had for seven or eight weeks been discovered in the superior part of the tumour. The skin, however, was no where discoloured. He was at this time thirty-two years of age. When first attacked with the disorder he was full and vigorous, but now much emaciated. His pulse, however, was good, for although for a considerable time a good deal of fever prevailed, it had now left him entirely, his skin was cool, and his pulse between seventy and eighty in a minute.

The remedies he had employed were these: At first he was repeatedly bled; the pained parts had been rubbed with a variety of stimulating applications, such as volatile liniment and tincture of cantharides, and blisters had been frequently applied. He had taken James's powders, camphors, and opium; but the latter being the only remedy from which he derived relief, the others had long been disused. Sixty drops of laudanum taken at bed-time, and twenty-five in the morning kept him for the most part tolerably easy, but he experienced much distress whenever these were omitted. The following is the advice which I proposed to him:

1. That two drachms of a weak mercurial ointment, containing only a fifth part of mercury, should be rubbed upon the swelling of his knee evening and morning for the space of twenty minutes each time, and continued five or six weeks if it did not excite salivation.

2. That he should use a warm bath of sea-water every second night: The whole body to remain immersed for the space of twenty-five minutes, or half an hour, and a quantity of the warm water to be poured from the height of three or four feet upon the swelled knee at each time of using the bath.

3. Instead of laudanum at bed-time, that he should take fifteen or twenty grains of Dover's powder.

4. That he should wear flannel next his skin, not only upon the diseased knee, but over his whole body.

5. If by these means the swelling did not abate in the course of four or five weeks, that blisters should be applied to it; the first to be applied upon that part of it in which the fluctuation was discovered, and the others alternately on each side of the joint.

I heard again from him in the month of June, when he informed me that he had been prevented from using the mercury by a physician who had been consulted on the receipt of my opinion. Being afraid that his debility might be increased by the mercury, he had desired that it might not be used, but all the other parts of the course which I had pointed out had been complied with. His general state of health was better, and by the use of the warm bath and Dover's powder his pains had been much relieved, but they always recurred on these remedies being laid aside, and the swelling of the knee was nearly in the same state as when he first applied to me. Besides this, he had been attacked with a painful swelling on the upper part of his right shoulder, which, after becoming red and tender, had ended in an extensive foul ulcer. This giving rise to much anxiety, for the sore was daily becoming deeper, he was particularly anxious to have some remedy pointed out for it.

In return to this, I desired that the mercury might still be employed with a view to remove or lessen the swelling of the knee, and I gave him formulæ of different ointments as dressings for the sore on the shoulder. I said, however, that he must depend chiefly on the surgeon in attendance for the treatment of this sore; but being within forty or fifty miles of London, I advised him, if he did not soon get better, to go there for the advantage of a consultation.

I did not hear of him again till the month of September, when he arrived in Edinburgh. He now informed me that he had gone to London on the receipt of my second letter, and that he had been advised to the use of guaiacum; a deep-seated pea issue had been inserted on the inside of the swelled knee; and differ-

ent ointments had been given him to apply in succession to the fore on the shoulder. Having continued, however, under the regular application of these for upwards of two months, and no advantage accruing from them, he determined at last on coming here. The pains over his joints were still very universal, almost every joint being more or less swelled, but they were not any where so severe as they had at first been. The swelling on the knee was very considerable, and a fluctuation was perceived, reaching from the patella, beneath the rectus muscle, nearly to the middle of the thigh. The skin, however, was not discoloured, and the joint was still in some degree capable both of flexion and extension. But the symptom which gave him most uneasiness was the ulcer upon his shoulder, which had now extended from the top of the shoulder over the clavicle, and down to the middle of the humerus. It had already destroyed some part of the deltoid muscle, by which the motion of the arm was much impeded, and a considerable portion of the clavicle was become carious.

This ulcer he had lately been informed was of a scrophulous nature, but as to me it had many of the appearances of a venereal sore, I decidedly said so, and on inquiry I found that there was still farther cause of suspicion. About three months before he was first attacked with rheumatism two small chancres appeared upon the penis, which were removed in the course of eight or ten days by the application of caustic, and the use of a very small quantity of mercury. The quantity he could not exactly ascertain, but he knew that he had not taken it for a week, and that his mouth had never been sore with it. I also found, that nearly about the time at which his shoulder became sore an eruption had appeared upon different parts of his body, particularly among his hair and on his breast, but which till now he had not mentioned, as he had not supposed it to be of any importance. This, however, along with the other circumstances of his situation, determined me to advise a full course of mercury, and which he the more readily agreed to from eve-

ry other remedy which had hitherto been tried having proved ineffectual.

He entered upon this course on the sixth of October. At first half a drachm of the blue ointment was rubbed in evening and morning, and one of the blue pills, with two grains of opium, were given at bedtime. The opium was necessary not only for preventing purging, but from the patient having been in the habit of taking it. At the end of ten days, as the mouth was not affected, nor any other symptom produced by the mercury, the quantity both of pills and ointment was doubled. This, in the course of a fortnight, rendered the mouth exceedingly sore, and produced some salivation; but the uneasiness excited by this was amply compensated by the relief which he had obtained. Although the pains in his joints had abated they had still given him much distress. This was almost entirely removed in the course of a day or two after his mouth became evidently affected, and being anxious to avoid the habit of taking opium, I found at the end of another week that he had left it off, and that he slept better without it than he had done for two years before. Still the knee continued nearly of the same size, but the sore on the shoulder was much better. Under the same dressings which he had for some time been using the surface of the sore soon became clean, the discharge was of a better consistence, and much less offensive, and in some parts new granulations had begun to appear.

The mercury was continued in such quantities to the end of the third month as was necessary to keep the mouth completely sore during the whole period, and during the course of the last of these months he drank daily an English quart of a strong decoction of sarsaparilla, guiacum, and mezereon.\* At the end of six weeks all the swellings of the smaller joints, particularly those of the fingers, were entirely removed, and even the fulness of the knee was considerably reduced. The sore on the shoulder was already con-

\* Vide Appendix, Vol. I. No. 46.

tracted to one half of its former size, and at the end of another fortnight the whole of it was cicatrised excepting those parts seated upon the carious part of the clavicle. At this time too the knee had assumed a very different appearance. It was not only much lessened but the fluctuation above the patella was entirely gone. No application had been made to it but a portion of the mercurial ointment, which, morning and evening, was rubbed upon it. In the course of the tenth week a thin, long exfoliation took place from the clavicle, and the small sore which remained healed in a few days thereafter. He continued here for several weeks after the course was over, and on going away, although the knee was about an inch in circumference larger than the other, it gave him no uneasiness, not even in walking; but a very considerable degree of stiffness remained in the joint of the right shoulder, and which I informed him might probably continue for a great length of time, perhaps even for life, owing to a considerable portion of the deltoid muscle having been destroyed by the ulcer. In order to lessen this stiffness as much as possible, I desired, as soon as the skin was sufficiently firm to admit of it, that the whole shoulder and arm should be rubbed evening and morning with some emollient oil, and if no relief was obtained from this, that he should go to Bath, and have the warm waters of that place pumped upon it. I found, however, after two years had elapsed, although in every other respect he continued well, that his shoulder remained in nearly the same state.

Many cases have fallen under my care of venereal pains which resembled rheumatism so much that it was difficult to distinguish of what nature they were; but in a great proportion of these, circumstances were discovered upon enquiry, by which the distinction was sufficiently well marked. In this, however, as well as in some others which I have met with, the symptoms were for a long while so evidently rheumatic that there was not the least cause to suspect them to be venereal. Venereal pains almost universally fix upon the middle parts of limbs; very rarely up-

on the joints only. Now in this case the joints only were affected, as very commonly happens in rheumatism, and the patient having been much exposed to the most frequent cause of that disease, while no symptom occurred that had any appearance of being venereal till these pains had continued upwards of twenty months. The ulcer on the shoulder was the first symptom that created suspicion; for when I prescribed the mercurial ointment, it was not, I must acknowledge, from thinking that the patient was infected with Lues Venerea, but from experience of its utility in similar affections of the joints proceeding from other causes.

An officer of the navy, who had been exposed to hard service both in the East and West Indies was seized with severe rheumatic pains in spring 1782. At first they were confined to the large joints, but afterwards a foreness prevailed over his whole body. He was about forty years of age, and till this time he had been strong and healthy.

All the remedies usually employed in rheumatism were advised. Flannel was applied, and the pained parts were rubbed with a variety of stimulating applications; blisters were applied to the parts that were most painful; sudorifics were used in various forms; and in the course of the first three years he had used a great variety of baths. He bathed at first in warm salt-water, and afterwards went both to Buxton and Bath; and he had last of all used the cold bath. No advantage, however, was obtained from any of these; and at last the only remedy which he employed was a large dose of laudanum at bed-time.

He had frequently been liable to pain and some degree of fulness in the region of the liver, which he attributed to his residence in India. This, however, never gave him much uneasiness, till the winter of 1785, when a soft diffused swelling, larger than it had ever been, and accompanied with some pain, was perceived exactly on the site of the liver. The tumour became larger, and at last a fluctuation of matter was perceived in it. In this situation I first saw him in the month of April; and the chief reason of my being called was to judge of the propriety of discharging the matter by an operation. This, however, I found to be inadmissible. The matter lay so deep that

it did not point any where, and the fluctuation was very obscurely felt. I therefore in the mean time advised, that mercury, which he was then taking, should be given in greater quantities, so as to render his mouth completely sore, and, as he was much reduced in strength, that his constitution should be supported with light nourishing food.

As he lived at a considerable distance I did not expect to see him again, neither did I hear any thing of him till the month of February thereafter when I was again desired to visit him. A considerable change had taken place in the nature of his complaints, and the following is the account which I received of it. His mouth had been rendered moderately sore with mercury, and in this situation it was kept for three weeks; but as it then gave him severe pains in his bowels, accompanied with purging, he did not afterwards use it in such quantities, nor was it judged necessary to do so, as the swelling, for which it was prescribed, was almost entirely carried off by what had already been done. It was therefore given in such quantities, as his stomach and bowels could easily bear; and this being continued for the space of a month longer, that is, for six or seven weeks in all, it was then left off. During this course of mercury the pains which had so long distressed him were much less severe, and at one period they had left him almost entirely. While the weather continued mild in summer and harvest they did not recur; but about the end of October they became more severe than they had ever before been. A few weeks, however, previous to this, symptoms of a more hazardous nature had made their appearance. In the month of September he was attacked with anasarcaous swellings of his legs, and soon thereafter with ascites, which, notwithstanding the usual remedies employed in such cases, increased so quickly, that in the course of seven or eight weeks from the first approach of the swelling, it became necessary to draw the water off from the legs by punctures; and by the middle of December the distension of the abdomen was so considerable that the operation of tapping was judged adviseable. These operations, however, had procured only a temporary relief, for although

the punctures had been frequently repeated, his legs, at the time of my being called to him, were much swelled, and his abdomen was more distended than at any period before the operation.

The chief reason, however, of my advice being taken at this time, was the appearance of some hard painful tumours upon his forehead, legs, and arms, one of which upon his right arm on the outside of the ulna, and another on the upper part of the os frontis, had burst some weeks before, and were now discharging a considerable quantity of a thin foetid matter. The others, viz. two upon his forehead, one upon his left arm, and one upon each leg were become very painful, and those on the head were discoloured, and contained such a quantity of matter as gave reason to think that they would also burst. The patient was at this time much emaciated, but he had no fever, and his skin was softer and his discharge of urine more plentiful than they generally are in dropical complaints.

As the tumours resembled venereal nodes, and as the peculiar foetor of the discharge from the ulcers, together with their sloughy appearance, gave farther cause of suspicion, I found, upon enquiry, that in September 1781, about six months before he was attacked with rheumatism, chancres appeared upon his penis, and a bubo in each groin, but that these symptoms were easily removed by the use of a small quantity of mercury, and a short confinement of eight or ten days, and that he had not since that period run any risk of being infected; that no other symptoms of the disease had appeared upon him, and that the only mercury he had used was that which was prescribed for the affection of his liver.

I now began to suspect even that the rheumatism with which he had so long been distressed was of the syphilitic kind, and my reasons for doing so were apparently conclusive. There was full evidence of infection being communicated while it did not appear that he had taken half the quantity of mercury which the nature of the symptoms that ensued would have required. These pains occurred at such a distance from the other symptoms as tended to confirm the suspicion. They had not been re-

lieved by any of the remedies which in the ordinary form of rheumatism prove for the most part useful, while they were for some time almost entirely removed by the mercury employed for the diseased state of his liver. These considerations, connected with the present appearances of the tumours and ulcers, determined me to say that he was poxed, and that he should begin to the use of such a quantity of mercury as his present situation would admit immediately upon the water in his abdomen being taken off, and which was done that very day.

Being afraid in his present state of debility of irritating his bowels by the internal exhibition of mercury, he was desired to use it in the form of unction only; and his legs being still much swelled and tender, he was made to rub it upon his arms and abdomen. In the course of a few days his mouth became sore, and at the end of a fortnight he discharged three or four English pints of saliva daily. This was more than we wished for, and he was desired to lessen the quantity of mercury; but as his pains were soon almost entirely removed, and the distress which he had experienced from the tumours and ulcers being also much lessened, he was thereby so much convinced of the propriety of his present treatment that it was with some difficulty he was prevented from carrying the course of mercury too far. Care, however, being taken, to support him with a light nourishing diet, and with a liberal use of wine, of which he took a bottle daily, he was enabled to bear the effects of mercury better than one in his state of health might otherwise have been expected to do. At the end of eight weeks, during which period his mouth had been kept constantly and fully affected, he had used twelve ounces of strong mercurial ointment. His pains were now entirely gone; the ulcers were cicatrised; and the tumours were so completely removed, that excepting those on the fore part of the legs, none of them had left any fulness by which their former situations could be discovered. The matter contained in those upon the forehead, and which at one period was just ready to burst out, was entirely absorbed, and only a slight discolouring of the skin remained; but what was still more remarkable, no swelling had as yet occurred in

the abdomen, and the anafarcous fulness of his legs and thighs was almost entirely gone, although the punctures last made in them had been healed upwards of three weeks. The mercury was continued for five weeks longer, during which period four ounces of ointment was rubbed in, by which the mouth was kept as sore as the patient could possibly bear it; and when at the end of the thirteenth week the mercury was left off no collection could be perceived in the abdomen; and excepting a slight degree of œdema on the upper part of the feet, they were altogether free of swelling. Even this disappeared in the course of a few weeks; and at the end of three years, when I had last an opportunity of hearing of him, he remained in good health.

The circumstances of this case, while they give much cause to think that hydropic symptoms may be induced by the virus of Lues Venerea, tend also to shew that mercury given in sufficient quantity acts with equal certainty in removing them as in the cure of any symptom of the disease. They also evince the power of mercury in the cure of that affection of the liver to which many are liable who have resided in the East Indies; and that even the most advanced stages of that disorder may be removed by a quantity of mercury that will not be sufficient for the cure of Lues Venerea. It also appears, from the result of this case, that the matter which sometimes forms in venereal nodes may be collected in considerable quantity, and yet carried off by mercury. It may be proper, however, to remark, that where this takes place the tumours in which the matter is contained begin to diminish almost as soon as there is evidence of the mercury having entered the system; and that when they do not diminish the matter should be discharged by a proper opening, in order to prevent it from affecting the bone beneath.

About two years ago I was desired by a gentleman to visit his wife, who I found had been liable for more than a year to what she considered as scorbutic spots upon different parts of her body, one of which, seated on the sternum, had about three months before

ended in an ulcer. At first the sore did not exceed the size of a sixpenny piece ; but at this time it was very extensive, reaching from one mamma to the other, and almost from the inferior point of the sternum to the top of it. It was foul, and discharged a thin foetid sanies. For upwards of three years she had been distressed with almost a constant head-ach, which occasionally was so severe as to deprive her entirely of sleep for many days together, and on some occasions nearly of her reason. It did not, like the aguish head-ach, fix upon one spot, but affected every part of the head alike. She was now about thirty years of age, and her menstrual flux regular. Till attacked with these head-achs she was healthy and rather corpulent ; but now she was much reduced, being almost entirely confined to bed with the violence of the pain, and she had scarcely any desire for food. Blood-letting, blisters, bark, cold-bathing, and a variety of nervous medicines, had all been tried in vain.

The eruption upon the skin, as well as the ulcer on the breast, having the true venereal aspect, I enquired of the husband whether he had of late been infected or not : He said that he had not, but he candidly informed me, that soon after his marriage, which happened more than four years before, and when he had no reason to think that he was infected, for he had no connection with any woman for a fortnight before marriage, and after having remained well for a fortnight thereafter, a chancre had appeared upon the preputium. Immediately upon this being perceived he applied to a surgeon and was cured ; and he had every reason to think that his wife had escaped ; for although she had complained of a soreness in the pudendum about the same period, it had gone so entirely off without any mercury being given, that the surgeon, by whose advice he was directed, had assured him, it must have proceeded from some other cause. He also recollected that soon thereafter a painful tumour had formed in one of her groins ; but as it also went off without coming to suppuration, and without the assistance of mercury, he had supposed even that this symp-

tom could be venereal, particularly as she continued in perfect health till attacked with the head-ach ; and no symptom of pox had ever appeared upon her, unless the eruption and ulcer already described should be of that nature.

From the whole of this history, the probability of the wife being infected with the venereal disease, and the necessity of a mercurial course were abundantly evident. Mercury was accordingly exhibited. Opium, which she had hitherto employed for lessening the violence of her head-ach was continued, while the sore was dressed with common wax ointment. Her mouth became sore in the course of a few days, and before the end of a fortnight she was under some degree of salivation. The eruption soon began to lessen, and the sore from being exceedingly foul became clean and florid, at the same time that the head-achs, for which no cure was expected, left her entirely : the mouth was kept completely affected ; the blotches disappeared altogether in the course of six or seven weeks, but the ulcer was not cicatrised till the end of the eleventh week. The mercury being continued three weeks longer was then laid aside, and neither the head-ach or other symptoms have since recurred.

In the month of July 1781 a young man about seventeen years of age was put under my care in a very miserable situation. The account which I received from his parents was, that till his fourteenth year he was remarkably strong and healthy, and exceedingly clever. About that period he became delicate, and was taken from school, in order to have full attention paid to his health. Worms, and a variety of other causes were suspected to give rise to this state of delicacy, and various remedies were employed without effect, when after two years had nearly elapsed sores appeared on different parts of his body ; his eyes became tender and inflamed, and at last he lost the use of one eye entirely, and about a year before I saw him he had been attacked with severe fits of epilepsy, which for the last two months had recurred several times a-day. He was now much emaciated, but his pulse was good, and the fits had not impaired his judgment.

Till this time he had been under the management of a physician, a relation of his own, who considering the complaint to be scrophulous, had prescribed bark, steel, cicuta, and sea-bathing; all of which, as well as different remedies for the epileptic fits, having been tried in vain, all hopes of a cure were lost, and for a long while nothing had been employed. My opinion was asked on account of the ulcers, some of which had of late become so painful that large doses of laudanum were required to procure rest. Besides several small ulcerated spots, there was at this time seven large foul ulcers on different parts of his body, none of which had given him much uneasiness while not deeper than the cellular substance; but having in different parts penetrated into the substance of muscles, they began now to impede the motion of the parts on which they were seated, which added much to the distress which they excited. His left eye exhibited a very singular appearance. It was somewhat enlarged, and that part of the tunica conjunctiva, which in a state of health is white, was of a deep red colour, while all the prominent part of the cornea opposite to the pupil was much thickened, and white like paper. He still retained the sight of his right eye, which, however, was much inflamed, and in a state of great irritability.

As the ulcers had a venereal appearance, particularly one upon the right side of his nose, and another on one of his temples, where it had penetrated to the muscle, I said so to the young man himself, and he confessed that he had all along been afraid of his disease being of that nature, but not being certain of this being the case, and afraid of incurring the displeasure of his parents, he had never till now, that enquiry was made concerning it, had the resolution to speak of it. The information he gave me was, that when he was about fourteen years of age he was infected by a woman with whom he had connection, and that his symptoms had been sores upon the penis and a swelling in the groin. These, by the use of mercury, which he received from a young man, at that time a student in the university, were removed; but as he had not taken it in a regular manner, and only in small quantity, he had always entertained suspicions of the symptoms which ensued be-

ing the consequence of this infection. I now decidedly said that he ought immediately to take mercury, and he entered upon the use of it that very evening. It was employed in the form of unction, and all the sores, excepting that upon his nose, were dressed with common cerate, the only application which he had hitherto made to them. As the ulcer upon his nose had already begun to disfigure his face, I advised it to be touched with caustic every second or third day, in order to stop the progress of the disease as quickly as possible, and besides this it was dressed with basilicon and precipitate. As the mercury did not readily affect his gums he was desired to take two of the blue pills every night at bed-time, and to continue to rub in the same quantity of ointment which he had used from the first, viz. a drachm evening and morning. In the space of three weeks from the commencement of the course a considerable salivation was induced, which was afterwards kept up by the unction alone till the end of the fifteenth week. The ulcers had become clean, and put on a healing appearance soon after the mouth became sore, and by the end of the ninth week they were all cicatrised; but the infection having been of very long duration, and the symptoms more inveterate than usual, I did not think it proper to advise the use of mercury to be sooner left off.

The most remarkable circumstance, however, in this case was, the cure which took place during the course of mercury of the fits of epilepsy. In less than three weeks they became less frequent, and not so violent as they had been before, and by the end of the sixth week they did not recur above once in three or four days. Long before the course was finished they vanished entirely, nor was he ever distressed with them afterwards. His left eye still continued white and opake, but the inflammation of the other being removed, he soon recovered the free power of vision, of which he had long been entirely deprived.

A married lady, twenty-six years of age, after being for some time distressed with severe head-aches, was attacked with epileptic fits, which at first were neither frequent nor severe, but recurred at last so often that she was commonly seized with three, four, or even more, daily. Preparations of copper and other remedies were employed with-

out effect. In other respects her health was good, till at last, after the fits had been more than usually severe for eight or ten days, she became suddenly lunatic, from which time the epilepsy did not recur.

In this situation she was kept at home for three or four months, but there being no prospect of her recovering, she was at last put under the care of a family accustomed to take charge of lunatics. As her keepers were desired to apply to me in the event of her health requiring any particular attention, I was called to her after she had remained with them about two years, in order to give directions for the management of some sores which had appeared in different parts of her body a considerable time before. Besides several small foul ulcers upon her toes and feet, there was a large one upon the wrist of her right arm; one upon her side, which had penetrated nearly to the ribs, and two upon the upper and back part of her head, where the cranium was found to be carious. These ulcers, they informed me, were preceded by an eruption, which they considered to be scorbutic, but which I found upon inspection to be venereal. On this being stated to her husband, he acknowledged that she might have been infected by him, but as she had never complained of any of the symptoms of Lues Venerea, he had hoped that she had escaped.

A course of mercury was advised, but as her lunacy was of the most unmanageable kind, she could not be made either to take the medicine inwardly, or to admit of the external application by unction. The latter might have been done by force, but the trouble of securing her twice a-day for that purpose would have been considerable.

Finding that she was fond of oatmeal porridge, she was allowed to take them both to breakfast and supper, and with each meal her keeper was desired to mix a spoonful of a watry solution of corrosive sublimate, in which was contained three quarters of a grain of this preparation. No obvious effect appeared from it till nearly the end of the third week, when her breath became affected, and her gums sore and spongy; but although the same quantity of mercury was continued, no salivation took place. Simple dressings

were applied to the fores. It became necessary, however, to make an incision along a considerable part of the left parietal bone, in order to discharge a quantity of foetid matter which had lodged between the teguments and a portion of that bone which was carious. All the rest of the fores soon put on a healing appearance. In the course of nine weeks they were completely healed, and during this period the maniacal symptoms also abated. In less than three weeks from the above period she became perfectly well, and no appearance of lunacy has since taken place, although several years have elapsed. The sore upon the left side of the head continued open for eight or nine months after the mercurial course was finished, owing to an extensive exfoliation from the parietal bone, which could not possibly be accomplished sooner.

These, as I have already observed, are only a few of a considerable number of cases of a similar nature which I might relate; but as the evidence which these afford, of the opinions which I have suggested being well founded, may be considered as sufficient; any farther argument would be unnecessary. The histories which I have given are in proof, that the syphilitic virus may remain for a great length of time in the system, without producing any of the ordinary symptoms of Lues Venerea: That other diseases altogether different from Lues Venerea in the form under which it usually appears, are, in some instances, induced by this virus. That the quantity of mercury commonly given in what is termed an alterative course may be sufficient for curing the existing symptoms of Lues Venerea, and yet altogether inadequate, however long continued, for removing the disposition. And lastly, although a course of the alterative kind may repeatedly fail, that the syphilitic disposition, as well as the worst symptoms of the disease, may be removed by the proper exhibition of a full quantity of mercury.

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# A P P E N D I X

TO VOL. I.

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**T**HIS Appendix contains formulæ of injections and other remedies for Gonorrhœa, enumerated in the preceding work.

- No. 1. R. Calomel. pp<sup>tt</sup>.  $\frac{3}{4}$  ii.  
Mucilag. gum arab.  $\frac{3}{4}$  ii. et adde.  
Aq. rosar.  $\frac{3}{4}$  iv.
- No. 2. R. Calomel. pp<sup>tt</sup>.  $\frac{3}{4}$  ii.  
Balsam. copaib.  $\frac{3}{4}$  i.  
Vitell. ovi.  $\frac{3}{4}$  fs. M. et adde paulatim.  
Aq. rosar,  $\frac{3}{4}$  iv.
- No. 3. R. Hydrargyr. purif.  $\frac{3}{4}$  ii.  
Mucilag. arab.  $\frac{3}{4}$  ii. M. S. A. et adde.  
Aq. destillat.  $\frac{3}{4}$  iv.

These formulæ of mercurial injections seem to act, as I have elsewhere observed, altogether as astringents. They excite little or no irritation, and when they prove successful they commonly do so in the space of a day or two. In all of them the mixture requires to be shaken when used; for even with the assistance of mucilage the mercury subsides so quickly that scarcely any of it will enter the syringe, if this precaution be omitted.

Instead of mucilage, prescribed in No. 3, I have sometimes employed honey. This proves more expeditious for extinguishing the mercury, but the injection prepared with it excites more pain. Whether mucilage or honey be employed, the mercury should be very completely titured.

- No. 4. R. Lap. calamin pp<sup>tt</sup>.  $\text{℥}$  ii.  
 Balsam. copaib.  $\text{℥}$  i.  
 Mucilag. arab.  $\text{℥}$  ii. M. S. A. et adde.  
 Aq. fontan.  $\text{℥}$  iv.
- No. 5. R. Lap. tutiæ pp<sup>tt</sup>.  $\text{℥}$  ii.  
 Mucilag. arab.  $\text{℥}$  ii. M. et adde.  
 Aq. fontan.  $\text{℥}$  iv.
- No. 6. R. Lap. calam. pp<sup>tt</sup>.  $\text{℥}$  iv.  
 Camphor. in pauxil. spirit. vin. rect. solut.  $\text{℥}$  i.  
 Mucilag. arab.  $\text{℥}$  iv. M. et adde aq. fontan.  $\text{℥}$  vi.  
 Ut fiat injectio.

In No. 4, quantity of the astringent earth is so small that it may be well mixed with the liquid at the time of using it, but in Nos. 5 and 6, where there is a greater proportion of earth, after shaking the phial, it should be allowed to subside for the space of a minute before filling the syringe. In this manner the finer particles only of the earth are thrown into the urethra; and it commonly proves as effectual as when the whole of it is used.

- No. 7. R. Alumen,  $\text{℥}$  ifs.  
 Solve in aq. distillat.  $\text{℥}$  viii.
- No. 8. R. Cortic. quercus  $\text{℥}$  i.  
 Coq. in aq. fontan.  $\text{℥}$  xx. ad.  $\text{℥}$  xvi. colaturæ adde,  
 Pulv. alumen.  $\text{℥}$  ii.
- No. 9. R. Gall. quercus contus.  $\text{℥}$  i.  
 Coq. in aq. fontan.  $\text{℥}$  xxx. ad.  $\text{℥}$  xx. cola et adde.  
 Pulv. alumen.  $\text{℥}$  iii.
- No. 10. R. Kin. pulv.  $\text{℥}$  ii.  
 Mucilag. arab.  $\text{℥}$  i. M. in mortario et adde aq. fontan.  
 bul.  $\text{℥}$  x.
- No. 11. R. Kin. pulv.  $\text{℥}$  ii,  
 Pulv. alumen.  $\text{℥}$  i.  
 Opii.  $\text{℥}$  ii.  
 Mucilag. arab.  $\text{℥}$  i. M. et adde.  
 Aq. fontan. bul.  $\text{℥}$  x.
- No. 12. R. Opii.  $\text{℥}$  i. solve in aq. font.  $\text{℥}$  vi.
- No. 13. R. Aq. rosar.  $\text{℥}$  vii. fs,  
 Tinctur. thebaic.  $\text{℥}$  fs. M.

In a great proportion of cases opium dissolved in water answers the purpose; but in a few instances I have found the spirituous tincture, in the proportions here mentioned, prove more effectual.

- No. 14. R. Balsam. canadensi.  
 Vel. copaib. ʒ iii.  
 Vitell. ovi. ʒ fs. M. et adde.  
 Aq. rofar. ʒ vi.

When the balsam and yolk of an egg are previously well rubbed together, the water may be mixed with them so completely that no great degree of separation will afterwards take place; but to prevent any inconvenience which might ensue from the balsam getting to the top of the mixture, it should always be well shaken immediately before the syringe is filled with it.

- No. 15. R. Cerufs. ʒ ii.  
 Mucilag. arab. ʒ ii. M. et adde.  
 Aq. fontan. destil. ʒ vi.

- No. 16. R. Sacch. saturni. ʒ i.  
 Solve in aq. destil. ʒ viii.

- No. 17. Aq. distill. ʒ viii.  
 Acet. lythargyr. gutt. xxiv. M.

When saccharum saturni, or cerussa acetata, as it is now termed, can be obtained pure, it is perhaps preferable for every purpose to vinegar of lytharge, as being of a more determined strength; but it is frequently so much adulterated that it will not dissolve but in very small quantities, even in distilled water. Some of it indeed is so very insoluble, that an ounce of water will not dissolve above a grain of it. By the addition of vinegar this may, it is true, be partly remedied; but vinegar, for many purposes, is not admissible in such quantities as would be necessary for rendering this article much more soluble than we usually find it. Two, three, or more drops of the vinegar of lytharge may be used in every ounce of injection. Two drops often prove sufficient, but many can bear eight or ten.

The following method of preparing vinegar of lytharge is the best I have met with. It is not very different from the extract of lead of goulard, but the strength of it is more certain.

R. Lythargiri lb iii.  
 Acet. destillat. lb x. coq. leni igne ad. lb vi.  
 Cola.

Besides boiling on a slow fire, during which time it ought to be well stirred with a wooden spatula, the whole should be allowed to cool, and the fæces to subside before straining.

Lead dissolved in this manner is easily mixed with water, and it proves to be a very convenient, as well as a very effectual method of using it.

- No. 18. R. Zinci vitriolat. vulgo vitriol. alb. ʒ fs.  
 Solve in aq. font. destillat. ʒ xvi.

- No. 19. R. Zinci vitriolat.  $\mathfrak{z}$  i.  
Solve in aq. destillat.  $\mathfrak{z}$  x. et adde.  
Acet. lythargyri gutt. xx. ut. f. injectio.

In some cases, where these articles have excited pain when used in this manner, they have been rendered perfectly mild by the addition of mucilage of gum arabic, and in others by camphor. Camphor does not dissolve completely in any watery fluid, but being previously well rubbed with a few drops of spirit of wine, as much of it may be mixed with the water as to render the other articles much less pungent than they otherwise would be. The camphor, however, separates in such quantities as renders it necessary to filter the solution before using it.

Although a precipitation necessarily takes place from a mixture of vitriol and saccharum saturni, the following combination of these two articles with opium gives a very useful form of injection.

- No. 20. R. Vitriol. alb.  
Sacchari saturni. a a  $\mathfrak{z}$  fs,  
Camphor,  $\mathfrak{z}$  i.  
Opii.  $\mathfrak{z}$  ii.  
Solv. in aq. fontan. bul.  $\mathfrak{z}$  xvi.  
Cola.
- No. 21. R. Fol. rofar. rub.  $\mathfrak{z}$  fs.  
Alumen. pur.  $\mathfrak{z}$  ii. infund. in aq. bul.  $\mathfrak{z}$  xvi. Cola. ut f. injectio.
- No. 22. R. Balsam copaib.  
Vitell. ovi. a a  $\mathfrak{z}$  fs. M. et adde.  
Infus. rofar. rubr.  $\mathfrak{z}$  xvi.
- No. 23. R. Cap. papaver. alb.  $\mathfrak{z}$  iv.  
Rad. althæ incis.  $\mathfrak{z}$  i.  
Infund. per noctem in aq. bul.  $\mathfrak{z}$  ii.  
Cola.
- No. 24. R. Hydrargyr. muriat. vulg. mercur. sublimat. corrosiv.  
gr. i.  
Solve in aq. fontan.  $\mathfrak{z}$  x.
- No. 25. R. Mercur. sublim. corros. gr. i.  
Acet. lythargyr. gutt. xvi.  
Aq. fontan.  $\mathfrak{z}$  viii. M. S. A.
- No. 26. Mercur. sublimat. corros. gr. i.  
Mucilag. arab.  $\mathfrak{z}$  ii.  
Aq. fontan.  $\mathfrak{z}$  vi. M.

Corrosive sublimate dissolved in water proves to be the most certain, and perhaps in every respect the best form of a stimulating injection. Some have advised a much stronger solution than any of these, even to the extent of a grain of mercury to three or four ounces of water. I suspect,

however, that those who recommend it of this strength have never made use of it, at least I have never met with any who could bear it. When the mercury is combined with water alone, as in No. 24. one grain to ten ounces proves sufficiently strong; but when mixed with saccharum saturni, with acetum lythargyri, or with mucilage, as in Nos. 25. and 26. a grain may be added to six or eight ounces of water. When mixed with either of the two first of these articles, some part of the mercury precipitates, and is therefore lost, and in the other the mucilage tends evidently to render it less active.

No. 27. R. Sal. ammon. crud. gr. x.  
Solve in aq. font.  $\bar{z}$  x.

No. 28. R. Aq. fontan.  $\bar{z}$  x.  
Spirit sal. aromat. gutt. lx. M.

No. 29. R. Aq. fontan.  $\bar{z}$  x.  
Sprit. corn. cervi gutt. lx. M.

No. 30. R. Formul. inject. No. 23.  $\bar{z}$  viii.  
Lixiv. caustic. gutt. xx. M.

I have frequently found both the volatile and caustic alkali prove useful where other injections had failed, but we cannot with any certainty point out the strength for any individual. While one is able to bear ten drops to every ounce of water, others cannot bear above three or four: The strength I have advised in the three preceding formulæ proves to be the best for general use, but patients are more easily affected with variety in the strength of these injections than of any other I have ever tried. The caustic alkali may be used in water alone; but may be ventured upon in larger quantities, and with more safety, when combined with a mucilaginous infusion.

No. 31. R. Ærug. ppt. gr. viii.  
Ol. oliv. Opt.  $\bar{z}$  iv. M.

No. 32. R. Ærug. ppt.  $\bar{z}$  i.  
Spirit. corn. cerv.  $\bar{z}$  iv.  
Digere et cola.  
R. Solut. supr. parat. gutt. xl.  
Aq. distillat.  $\bar{z}$  x. M.

Verdigris mixed with oil may be used with perfect safety of the strength mentioned in No. 31, but as injections prepared with oil prove dirty and disagreeable in the application, I commonly prefer the form of the remedy No. 32.

A much larger proportion of verdigris is commonly advised, but when more is employed, it precipitates immediately on being added to the water. Even of this strength the precipitation cannot be prevented entirely but by adding about a half more of the volatile alkali to the filtered solution of the verdigris. After filtrating through paper, if two ounces of volatile alkali be added to it, no precipitation will take place if distilled water is employed; but in this case, a greater quantity of the solution

may be added to the same quantity of water. Instead of forty drops, forty-eight or fifty may be added to ten ounces of water.

- No. 33. R. Aq. fontan.  $\text{℥}$  x.  
Tinctur. cantharid. gutt. xx. ad xxx. M.

The three following are prescriptions for bougies.

- No. 34. R. Emplast. diachyl. simpl.  $\text{℥}$  iv.  
Cer. purifs.  $\text{℥}$  ifs.  
Ol. oliv. opt.  $\text{℥}$  iii.

- No. 35. R. Emplast. commun,  
Spermat. cæt. a a  $\text{℥}$  iv.  
Ol. oliv. opt.  $\text{℥}$  fs.  
Minii.  $\text{℥}$  fs. M.

- No. 36. R. Emplast. commun.  $\text{℥}$  vi.  
Cera flavæ puriss.  
Spermat. cæt. a a  $\text{℥}$  ii.  
Ol. oliv. opt.  $\text{℥}$  i.  
Antimon. crud. pp<sup>tt</sup>.  $\text{℥}$  fs. M. S. A.

Any of these prescriptions afford a good composition for bougies. They require to be slowly melted, and the different articles to be well mixed together. No. 34. is the simplest and perhaps the best, the red lead in No. 35. and antimony in No. 36. being added chiefly for the purpose of affording variety of colour. No. 37. is a composition for bougies recommended by Mr. John Hunter\*, and No. 38. by Mr. Sharpt.

- No. 37. Take oil of olives three pints, Bees wax one pound, Red lead a pound and a half. Let them be boiled together on a slow fire for six hours.

- No. 38. R. Diachyl. cum pice burgund.  $\text{℥}$  ii.  
Argent. viv.  $\text{℥}$  i.  
Antimon. crud. pp<sup>tt</sup>.  $\text{℥}$  fs.

The quicksilver to be previously dissolved in balsam of sulphur, or in honey, and added to the plaster when melted in a moderate heat.

Any of these compositions, when boiled to a proper consistence, will answer for the formation of bougies, which is done in the following manner: While the liquid still continues warm, let a piece of fine old linen be dipped in it, taking care with a spatula to cover the whole of it. If the melted liquor be of a proper heat, no more of the plaster will adhere to the linen than is necessary; but as air bubbles are apt to rise and produce inequalities on the surface of the cloth, the spatula made use of should be somewhat warmer than the plaster, and by means of it the whole should be made as smooth as possible. The plaster might indeed be spread entirely with the spatula; but this is not only attended with more trouble, but it does not cover the cloth with sufficient equality.

\* See Treatise on the Venereal Disease, p. 137.

† See Critical Enquiry by Samuel Sharp, F. R. S. &c.

The cloth being sufficiently cold, may be immediately formed into bougies, and the whole should, in the first place, be cut into the number that is meant to be made. The most exact method of doing this is by means of a sharp pointed knife directed by a rule. The pieces should be eleven inches in length for bougies of a full size; but they should likewise be kept of all the variety of lengths for strictures of different heights in the urethra.

A variety of directions have been given for the form of bougies. Some advise them to be made nearly of an equal thickness to within an inch of their smallest end, and to taper from that to the point, while a great proportion of them are made to taper to within an inch or two of the point, and the rest of them are cylindrical. I once thought that this last form of bougie was the best; but after a long course of experience in this branch of business, I am now convinced, that bougies, which taper equally from one end to the other, are the best, and that this form answers equally well for every variety of size. They are introduced more easily, and less pain than any of the others; the linen should therefore be cut in such a manner as to give this form to the bougies. When rightly spread, and the linen sufficiently fine, a well shaped bougie will be formed of a slip of about five eighths of an inch broad at its largest end, and somewhat more than three eighths at the smallest end. This forms a bougie of a middle size; for particular purposes they must be considerably larger, and for others not so large by a great deal.

These slips of linen are now to be rolled up as neatly as possible with the fingers; and in order to give them a smooth polished surface, they should be smartly rolled between a piece of smooth hard timber, and a plate of fine polished marble: This being continued till the whole are rendered perfectly smooth and firm, and their points being properly rounded in order to facilitate their introduction, they are in this state to be kept for use.

These directions will convey an idea of the method of preparing bougies, but no surgeon can ever become so expert in forming them as those artists who are daily accustomed to prepare them in large quantities. I must here again observe, however, in addition to what I had occasion to remark in a former part of this work, that bougies, properly prepared with *resina elastica*, are preferable, in many circumstances, to such as are made with any kind of platter. They not only prove much more durable, but more force can be employed with them, and as they do not break or crack by remaining in the urethra, they remain in it with less pain and inconvenience than any other bougie that has yet been invented.

Cat-gut has frequently been used as a bougie; but after various trials being given to it, I do not find that it answers the purpose: It cannot be made sufficiently smooth, and it sometimes swells so much as to excite a good deal of irritation; and lead, which was one of the first articles used for bougies, is so firm that it always creates much pain, while at the same time it is so apt to break that different instances having occurred of this happening in the urethra, it has now been long laid aside.

The six following prescriptions are meant for the removal of warts and other excrescences, and they answer equally well whether they proceed from Gonorrhœa or Lues Venerea. It would appear, however, that there is a material difference between the warty excrescences which occur as a consequence of these diseases, and such as we usually meet with from other causes; for while the former are for the most part easily removed by any of these applications, even by the pulvis sabinae alone, the latter are seldom acted upon by any of them, if it be not by the strong solution of corrosive sublimate in No. 40. and of mercury and spirit of nitre, No. 41. both of which are possessed of a strong degree of causticity.

- No. 39. R. Sal-ammon. crud.  $\text{℥ i.}$   
Solve in acet. distillat.  $\text{℥ ii.}$   
Aq. fontan.  $\text{℥ iv.}$
- No. 40. R. Hydrargyr. muriat. vulgo merc. sublim. corros.  
Sal-ammon. crud. a a  $\text{℥ ss.}$   
Solve in aq. fontan.  $\text{℥ iv.}$
- No. 41. R. Argent. viv.  $\text{℥ i.}$   
Solve in spirit. nitr. fort.  $\text{℥ ii.}$
- No. 42. R. Pulv. fol. fabin.  
Calomel. a a  $\text{℥ i. M.}$
- No. 43. R. Pulv. fol. fabin.  
Mercur. sublim. corros. a a  $\text{℥ iii.}$   
Mercur. precip. rub.  $\text{℥ i. M.}$
- No. 44. R. Alumen. ust.  
Mercur. precip. rub. a a  $\text{℥ i. M.}$

The following form of decoction of sarsaparilla and mezereon is of a strength which most people can bear; when a greater proportion of mezereon is added, it excites sickness, and a very disagreeable sensation in the throat. I mention it here as I have had occasion to speak of it in the preceding work; and I shall also have cause to refer to it when treating of a Lues Venerea.

- No. 45. R. Rad. sarsæ  $\text{℥ ii.}$   
Cortic. radic. mezer.  $\text{℥ iss.}$   
Coq. in aq. fontan.  $\text{℔ iii. ad ℔ ii.}$   
Colaturæ, adde.  
Syrup. altheæ  $\text{℥ i.}$

The following is the Decoctum Lusitanicum, or Lisbon diet-drink.

- No. 46. R. Rad. sarsaparil.  
Santal. alb.  
Rubr. a a  $\text{℥ iii.}$   
Rad. glycyriz.  
Mezerei. a a  $\text{℥ ss.}$   
Ligni rhodii.  
Guagaci.

Sassafras. a a.  $\text{℥}$  i.

Antimon. crud.  $\text{℥}$  ii. misce, et infunde in aquæ fontanæ  
bullientis.  $\text{℔}$  x. per horas xxiv. dien, coque ad  $\text{℔}$  v.  
colaturæ capiat a  $\text{℔}$  i. s. ad.  $\text{℔}$  iv. quotidie.

Vel R. Rad. farfaparillæ.

Ligni sassafras.

Ligni fantal. rubri.

Guagaci a a.  $\text{℥}$  iii.

Cortic. rad. mezer.  $\text{℥}$  i.

Semin. corriand.  $\text{℥}$  vi.

Coq. in aq. fontan.  $\text{℔}$  xx. ad  $\text{℔}$  x.

Sumat  $\text{℔}$  s. ter quaterve indies.

*Unguentum e calce zinci.*

No. 47. R. Olei olivarum opt.  $\text{℥}$  iii.

Ceræ albæ.

Sperm. cetæ a a  $\text{℥}$  iii.

Leni calore liquefc. dein adde. florum zinci  $\text{℥}$  s.

*Unguentum e lapide calaminare.*

No. 48. R. Olei oliv. opt.  $\text{℥}$  iii.

Ceræ albæ.  $\text{℥}$  i. s.

Sperm. ceti.  $\text{℥}$  s.

Lapid. calamin. pp<sup>tt</sup>.  $\text{℥}$  v. M. S. A.

V O L. II.

THE following Appendix contains formulæ of all the medicines enumerated in the second volume, as well as of some others occasionally employed by other practitioners in the cure of Lues Venerea.

No. 1. *Emplastrum hydrargyri, vulgo, Emplastrum cæruleum, vel mercuriale. Ph. Edin.*

R. Olei olivarum.

Resinæ albæ utriusque partem unam.

Hydrargyri partes tres.

Emplastri lythargyri partes sex.

Cum oelo et resina, liquefactis simul, et dein refrigeratis, teratur hydrargyrus, donec evanescant globuli; tum paulatim addatur emplastrum lythargyri liquefactum, et omnia accurate misceantur.

*Unguentum hydrargyri fortius, vulgo, Unguentum mercuriale.*  
*Pharm. Lond.*

- No. 2. Hydrargyr. purif. P. libras duas.  
 Adepis fuillæ præparatæ P. uncias tres et viginti.  
 Sevi ovilli preparati P. unciam unam.

Tere primum hydrargyrum cum sevo et tantulo adepis fuillæ, donec globuli visum fugerint; dein adde quod reliquum est adipis, ut fiat unguentum.

*Unguentum hydrargyri mitius.*

- R. Unguentum hydrargyri fortioris partem unam.  
 Adepis fuillæ præparatæ partes duas, misce.

- No. 3. *Pilulæ hydrargyri, vulgo, Pilulæ mercuriales. Pharm.*  
*Edin.*

- R. Hydrargyri.  
 Mannæ, utriusque unciam unam, pulveris glycyrrhizæ uncias duas.

Tere hydrargyrum cum manna in mortario vitreo, donec illius globuli visum penitus effugerint, addito prout opus fuerit, mucilaginis gummi arabici aliquantulo; dein pulverem glycyrrhizæ adjice, et aqua fiat massa, statim dividenda in pilulas quadringentas octoginta æquales.

- No. 4. *Solutio mercurii gummosa, vulgo. Plenk's solution.*

- R. Mercurii vivi depuratissimi 3 i.  
 Gummi Arabici 3 ii.

Terantur invicem in mortareo lapideo, addito medio, cochleari aquæ fumarizæ, donec mercurius penitus dispareat in mukum. Exacte subactis admisce sensim conterendo.

- Syrupi kermesini 3 fs.  
 Aquæ fumarizæ 3 viii.  
 Sum. mane et vespere, cochlearia duo.

*Solutio Mercurii Alia.*

- R. Hydrargyr. purifs. 3 ii.  
 Gummi Arabici 3 fs.

Terantur invicem in mortareo lapideo, addito medio, cochleari aquæ, donec hydrargyrus in mukum dispareat. Huic subacto addè.

- Aquæ fontanæ 3 ix.

- No. 5. *Mel Mercuriale.*

- R. Mellis;  
 Hydrargyri, utriusque unciam,

Terantur in mortareo marmoreo donec hydrargyri globuli non amplius appareant.

No. 6. *Hydrargyrus cum creta, vulgo, Mercurius alkalifatus.*  
*Ph. Lond.*

R. Hydrargyri purificati uncias tres.  
Cretæ preparatæ uncias quinque.  
Tere simul, donec globuli visum fugerint.

No. 7. *Hydrargyrus calcinatus, vulgo, Mercurius calcinatus.*  
*Ph. Lond.*

R. Hydrargyri purificati libram unam.  
Hydrargyrum in cucurbita vitrea, cui fundus planior sit, in balneo arenæ, caloris 600°, expone, donec in pulverem rubrum concreverit.

No. 8. *Hydrargyrus muriatus corrosivus, vulgo, Mercurius sublimatus corrosivus.* *Ph. Ed.*

R. Hydrargyri,  
Acidi nitroci diluti, utriusque uncias quatuor.  
Muris exsiccatæ,  
Ferri vitriolati exsiccati, utriusque uncias quinque.

Solvatur hydrargyrus in acido nitroso, et vaporet solutio in massam albam penitus siccam; dein adde muriam et ferrum vitriolatum. Bene contrita et commixta indantur phialæ, quam fere dimidiam impleant; et ex arena, primum igne leni, postea sensim aucto, sublimentur.

No. 9. *Hydrargyrus muriatus mitis, vulgo, Calomelas, sive mercurius dulcis.*

R. Hydrargyri muriati corrosivi, in mortario vitreo triti uncias quatuor,  
Hydrargyri uncias tres cum semisse.

Terantur simul in mortario vitreo ad extinctionem hydrargyri; pulvisque phialæ oblongæ, cujus tertiam tantum impleat partem, inditus, ex arena calida sublimatur. Sublimatione peracta confractaque phiala, pulvis rubens circa fundum et albicans circa collum ejus pariter rejiciendus est, massa vero reliqua, ter quatuorve denuo sublimando, et in pulverem tenuissimum terenda.

No. 10. *Solutio mercurii spirituosæ.*

R. Mercur. sublimat. corros. gr. x.  
Solue in spirit. vin. gallic 3 xvi.

No. 11. *Pilulae e mercurio sublimato corrosivo.*

R. Mercurii sublimati corrosivi.  
 Salis ammoniaci, utriusque grana decem.  
 Aquae distillatae drachmam.  
 Conservae rosarum scrupulos duos.  
 Pulveris radices glycyrrhizae, q. s. ut f. massa in pilulas octaginta dividenda.

No. 12. *Aqua phagadenica.*

R. Mercurii sublimati corrosivi scrupulum unum.  
 Solve in aquae calcis libram unam,

No. 13. *Hydrargyrum nitratus ruber, vulgo, Mercurius precipitatus ruber. Ph. Edin.*

R. Hydrargyri.  
 Acidi nitri diluti, utriusque libram unam,

Solvatur hydrargyrum, lentoque igne vaporet solutio in massam albam ficcam; quae in pulverem contrita, et cucurbitae vitreae inditae, torreatur igne, sensim aucto, materia assidue bacillo vitreo agitata ut aequaliter incalescat, donec ejus paucillum, cochleari vitreo exemptum et refrigeratum, squamulas splendentes rubras exhibeat. Tum vas ab igne removeatur.

No. 14. *Unguentum Hydrargyri Nitrati, vulgo, unguentum Citrinum.*

Hydrargyri unciam unam.  
 Acidi nitrosi, uncias duas.  
 Axungiae porcinae libras duas.

Digere hydrargyrum cum acido nitroso super arenam calidam, ut fiat solutio, quam calidissimam adhuc misce cum axungia porcina liquefacta, et denuo frigesciente; strenue dein misturam subige in mortario vitreo, ut fiat unguentum.

No. 15. *Hydrargyrum precipitatus cinereus, vulgo, Pulvis mercurii cinereus. Ph. Edin.*

R. Hydrargyri.  
 Acidi nitrosi diluti, paria pondera.

Misce ut solvatur hydrargyrum, solutum aqua pura dilue, et adde aquae ammoniacae quantum satis sit ad hydrargyrum penitus ab acido liberandum; pulvis dein aqua pura lavetur et exsiccat.

No. 16. *Hydrargyrus vitriolatus flavus vulgo, Turpethum minerale. Ph. Lond.*

R, Hydrargyri purificati libram unam.  
Acidi vitriolici uncias quindecem.

Mista in vase vitreo, gradatim incalescant donec coëant, et materia igne acri penitus exsiccentur. Hæc, plurima aqua distillata calida affusa, statim flavescet, et in pulverem fatiscet, pulverem tere cum hac aqua in mortario vitreo. Postquam pulvis subsederit aquam effunde, et aqua distillata lava materiem donec saporis expers fuerit.

No. 17. *Pilulæ e mercurio acetato, vulgo, Trochisci Keyseri.*

R. Mercurii acetati.  
Mannæ purif.  
Pulv. gum. arab. utriusque 3 i.  
Aquæ rosæ, q. f. ut f. massa in pilulas sexaginta dividenda.

No. 18. *Pilulæ e mercurio tartarifota.*

R. Mercurii tartarifat. 3 i.  
Pulv. rad. glycyrrhiz.  
Conserv. rosæ. utriusque 3 ii.  
Mncilag. gum. arab. q. f. ut f. massa in pilulas sexaginta dividenda.

No. 19. *Gargarifina e borace.*

R. Borac. purif. 3 i.  
Solv. in aquæ fontanæ bullientis libram unam, et adde Mellis optim. uncias duas.

No. 20. *Pilulæ Plummeri.*

R. Calomelanos.  
Sulphuris aurat. autimon. utriusque unciam.  
Conserv. Rosar. q. f. ut fiat massa.

No. 21. *Decoctum ligni guagaci.*

R. Rafur. ligni guajac. 3 ifs.  
Rad. glycyrrhizæ 3 fs.  
Coq. in aq. fontanæ lb ii. ad lb ifs.  
Colaturæ adde.  
Sacchari, q. f.

No. 22. *Decoctum sarsaparillæ.*

R. Radicis sarsaparillæ fissæ 3 iii.  
Aquæ bullientis libras tres.

Infundantur per horas quatuor, dein expresso liquore probe contundatur radix, cui iterum adjice liquorem. Macera per horas septem, postea coque ad libras duas, et fortiter expremendo cola.

No. 23. *Decoctum rad. mezerei.*

R. Corticis radice mezerei, drachmam.  
Radice glycyrrhizæ, drachmas duas.  
Aq. fontanæ libras tres.  
Coque ad libras duas.  
Colaturæ adde.  
Syrup. althææ unciam unam.

No. 24. *Pulvis ipecacuanhæ compositus, vulgo, Pulvis Doveri, Pharm. Lond.*

R. Ipecacuanhæ.  
Opii purificati duri, singulorum in pulverem tritorem drachmam unam.  
Kali vitriolati in pulverem triti unciam unam. Misce.

No. 25. *Unguentum mercuriale album.*

R. Unguent. simplic. Ph. Edin. uncias duas.  
Calomelanos drachmas duas. Misce.

No. 26. *Unguentum mercuriale rubrum.*

R. Unguent. Basilic. Pharm. Edin. unciam unam.  
Mercur. precip. rub. pp<sup>tt</sup>. drachmas duas. Misce.

No. 27. *Unguentum ex Æruginē.*

R. Unguent. basilic. Pharm. Edin. unciam unam.  
Æruginis pulv. scrupulum unum. Misce.

No. 28. *Unguentum saturninum, Pharm. Lond.*

R. Cerussæ acetatæ drachmas duas.  
Ceræ albæ P. uncias duas.  
Olei olivæ M. libram dimidiam.

Cerussam acetatam, in pulverem tritam, cum aliqua olei parte conterē; deinde eam ceræ, cum oleo reliquo liquifactæ, adde. Misturam agita donec refrixerit.

No. 29. *Linimentum ceræ Pharm. Lond.*

R. Ceræ albæ P. uncias quatuor.  
Spermatidis ceti P. uncias tres.  
Olei olivæ M. libram unam.







